



**THE IMPACT OF COMMERCIAL BANKS
DEVELOPMENT (DOMESTIC CREDIT IMPORTS
AND INFLATION) ON ECONOMIC GROWTH IN
CAMEROON.**

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TABLE OF CONTENTS

TABLE OF CONTENTS	1
THESIS APPROVAL PAGE	4
DECLARATION	5
FORWARD	6
ABSTRACT.....	7
ÖZ.....	9
ARCHIVE RECORD INFORMATION	11
ARŞİV KAYIT BİLGİLERİ	12
ABBREVIATIONS	13
1. CHAPTER ONE: INTRODUCTION	14
1.1. Background Of The Study	14
1.2. Problem Statement	17
1.3. Research Question	19
1.4. Research Objectives	19
1.5. Hypothesis Of The Study	19
1.6. Significance Of The Study	20
1.7. Research Scope	20
1.8. Key Terms Definition	21
1.9. Thesis Organization	21
2. CHAPTER TWO: LITERATURE REVIEW	23
2.1. Introduction	23
2.2. Concept Of Banking Sector Development	23
2.3. Overview of The Cameroon Banking Sector	24
2.4. Commercial Banks	26

2.4.1.	Definition Of Commercial Bank	26
2.4.2.	Operations Of Commercial Bank	27
2.5.	Theoretical Framework	28
2.5.1.	Classical Model.....	29
2.5.2.	Neo - Classical Model Of Solow/Swan	29
2.5.3.	New Economic Growth Theories (Endogenous Growth)	30
2.5.4.	Unified Growth Theory	30
2.6.	Hypothesis Development.....	31
2.6.1.	The Impact Of Loans (Domestic Credit) Provided By Commercial Banks On The Economic Growth.	31
2.6.2.	Relationship Between Imports And Economic Growth Of Cameroon	34
2.6.3.	Relationship Between Consumer Price Index and Economic Growth of Cameroon.....	36
2.7.	Empirical Review	37
2.8.	Research Gap.....	38
2.9.	Summary	38
3.	CHAPTER THREE: RESEARCH METODOLOGY.....	40
3.1.	Introduction	40
3.2.	Research Design.....	40
3.3.	Specification of The Model Method of Data Analysis and Investigations	40
3.4.	Measurement of Variables or Justification of Variables.....	42
3.4.1.	Commercial Banks Development and Macro-Economic Factors (Imports And Cpi) (IV)	42
3.4.1.1.	Loans (Domestic Credit)	42
3.4.1.2.	Macro Economic Factors	43
3.4.1.3.	Economic Growth (DV).....	45
3.5.	Sampling.....	45
3.6.	Data Analysis Methods.....	45
3.6.1.	Unit Root Tests	46
3.6.2.	Bound Cointegration Test.....	47
3.6.3.	Estimating Short-Run Coefficients	48
3.6.4.	Estimating Long-Run Coefficients	48

3.7. Introduction	48
3.7.1. Bi-Threshold Nardl Model	49
3.7.2. Multiple Threshold NARDL	50
3.8. Non-Linear ARDL Co-Integration Test.....	51
3.9. Summary.....	53
4. CHAPTER FOUR: DATA ANALYSIS, RESULTS AND DISCUSSION	54
4.1. Introduction	54
4.2. Graphical Representation of Data.	54
4.3. Descriptive Statistics	57
4.4. Empirical Analysis.....	58
4.4.1. Pearson Correlation Coefficient Test	58
4.4.2. Unit Root Test.....	59
4.4.3. Bound Test Approach To Cointegration.....	63
4.4.4. Error Correction Model ARDL Short Run	64
4.4.5. Long-Run Estimates	65
4.4.6. Treshlod Ardl	66
4.4.7. Threshold ARDL Short-Run Estimates	67
4.4.8. Threshold Ardl Long-Run Estimates	68
4.4.9. Bound Test Approach to Cointegration Threshold ARDL.	69
4.4.10. Bound Test Approach To Cointegration NARDL.	70
4.4.11. NARD Long-Run Estimates.....	70
4.4.12. NARDL Short-run estimates.....	71
5. CHAPTER FIVE: RESEARCH CONCLUSIONS.....	72
5.1. Introduction	72
5.2. Research Conclusion	72
5.3. Recommendation For Future Studies.....	72
REFERENCE.....	74
LIST OF TABLES.....	77
LIST OF FIGURES	78
CURRICULUM VITAE	79

THESIS APPROVAL PAGE

I certify that in my opinion the thesis submitted by Ndongo Edoua FRANCK OLIVIER titled “THE IMPACT OF COMMERCIAL BANKS DEVELOPMENT (DOMESTIC CREDIT), IMPORTS AND CONSUMER PRICE INDEX ON ECONOMIC GROWTH IN CAMEROON” is full adequate in scope and in quality as a thesis for the degree of Master of Science degree.

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This thesis is accepted by the examining committee with a unanimes vote in the Department of Business Administration as a Master of Science thesis. thesis. 27/12/2024

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DECLARATION

I hereby declare that this thesis is the result of my own work and all information included has been obtained and expounded in accordance with the academic rules and ethical policy specified by the institute. Besides, I declare that all the statements, results, materials, not original to this thesis have been cited and referenced literally.

Without being bound by a particular time, I accept all moral and legal consequences of any detection contrary to the aforementioned statement.

Name Surname : Ndongo Edoua FRANCK OLIVIER

Signature :.....

FORWARD

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ABSTRACT

Commercial banks promote economic development by encouraging savings through deposit plans, channeling unused funds from the wealthy into profitable ventures, and supporting capital formation. Rose argues that savings drive capital development, but the cost of credit is also influenced by the law of scarcity. When savings are few, credit becomes more expensive to get. (Rose, 1986)

Like many developing nations, Cameroon's economy is heavily impacted by a number of macroeconomic factors that are essential to its expansion. Among these are the number of imports, the impact of commercial banks on domestic lending, and changes in the consumer price index (CPI), which are thought to be important indicators of economic growth and health. Even while these aspects seem important, there is still a lack of empirical research devoted to figuring out how they together affect the country's economic growth.

Research objectives of the study are to examine the impact of loans (domestic credit) provided by commercial banks on the economic growth, to assess the influence of imports on economic growth of Cameroon, and to determine the impact of consumer price index on economic growth of Cameroon.

The purpose of this study was to determine how Cameroon's economic growth is impacted by the rise of commercial banks, imports, and inflation. To determine the long-term and short-term relationships between GDP growth, domestic credit, imports, and inflation, the study used the quantitative ARDL approach.

The study came to the conclusion that there is a positive short-term association between inflation, economic growth, imports, and domestic credit.

However, it was shown that the stability of the banking industry had no bearing on the expansion of the economy.

Given the foregoing, the analysis comes to the conclusion that neither the null hypothesis 1 that there is no connection between domestic credit and economic growth nor the null hypothesis 2 that there is no connection between imports and economic

growth are true and lastly the null hypothesis 3 of no relationship between inflation are not rejected.

Keywords: Economic Growth; Commercial Banks; Loans; Domestic Credit; Imports; Consumer Price Index



ÖZ

Ticari bankalar, mevduat programları yoluyla tasarrufları teşvik ederek, zenginlerin atıl tasarruflarını verimli yatırımlara yönlendirerek ve sermaye oluşumunu destekleyerek ekonomik kalkınmayı destekler Rose, tasarrufların sermaye gelişimini yönlendirdiğini, ancak kredi maliyetinin de kıtlık yasasından etkilendiğini savunuyor. Tasarruflar az olduğunda kredi almak daha pahalı hale gelir. (Gül, 1986)

Gelişmekte olan birçok ülke gibi Kamerun'un ekonomisi de genişlemesi için gerekli olan çeşitli makroekonomik faktörlerden ağır bir şekilde etkileniyor. Bunlar arasında ithalat miktarı, ticari bankaların yurt içi kredilere etkisi ve ekonomik büyüme ve sağlık açısından önemli göstergeler olduğu düşünülen tüketici fiyat endeksindeki (TÜFE) değişimler yer alıyor. Bu yönler önemli görünse de, bunların birlikte ülkenin ekonomik büyümesini nasıl etkilediğini anlamaya yönelik ampirik araştırmaların eksikliği hala mevcut.

Bu çalışma Kamerun'da ticari bankaların gelişimi, ithalatı ve enflasyonunun ekonomik büyüme üzerindeki etkisini ortaya koymak amacıyla yapılmıştır. Çalışmada GSYİH büyümesi, yurt içi kredi, ithalat ve enflasyon arasındaki uzun vadeli ve kısa vadeli ilişkiyi kurmak için ARDL'nin niceliksel metodolojisi kullanılmıştır.

Bu bağlamda çalışma, yurt içi kredi, ithalat, enflasyon ve ekonomik büyüme arasında kısa dönemde pozitif bir ilişkinin var olduğu sonucuna varmıştır.

Öte yandan bankacılık sektörünün istikrarının ekonominin büyümesi üzerinde herhangi bir etkisinin olmadığı tespit edildi.

Yukarıdakilerin ışığında, çalışma, hem yurt içi kredi ile ekonomik büyüme arasında bir ilişkinin olmadığını belirten sıfır hipotezi 1'in, hem de ithalat ile ekonomik büyüme arasında bir ilişkinin olmadığını belirten sıfır hipotezi 2'nin ve son olarak enflasyon arasında hiçbir ilişkinin bulunmadığını belirten sıfır hipotezi 3'ün hepsinin geçerli olduğunu reddettiğimiz sonucuna varmaktadır.

Anahtar kelimeler: Ekonomik Büyüme; Ticari Bankalar; Krediler; Yurt İçi Kredi; İthalat; Tüketici Fiyat Endeksi



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ABBREVIATIONS

CPI	: Consumer Price Index
DC	: Domestic Credit
INF	: Inflation
PLCs	: Private Limited Companies
IMP	: Imports
GDP	: Gross Domestic Products
NPL	: Non Performing Loans
SSA	: Sub Saharan Africa
COBAC	: Central Banking Comission
BEAC	: Bank Of Central African States
CEMAC	: Economic And Monetary Community Of Central Africa
IMF	: International Monetary Fund
WDI	: World Development Index

1. CHAPTER ONE: INTRODUCTION

1.1. Background of The Study

Deposit-taking banks play a crucial role in encouraging economic development by transferring cash from those with surplus to those in need of investment objectives, as acknowledged in economics research. To effectively promote economic growth, banks should lend to critical industries that can act as catalysts. Banks must properly manage their risks to remain solvent and supply enduring capital, which is crucial for economic growth. (Trading Economics, 2017)

Cameroon is a sub-Saharan nation in central Africa that lies between latitudes 20 and 13 0 and longitudes 80 and 160 of the Greenwich meridian. The equator's northern and southern regions Cameroon is a triangle that shares boundaries with the Atlantic Ocean to the south, the Republic of Equatorial Guinea to the south, the Central African Republic to the east, the Chad Republic to the north, and Nigeria to the west.

Cameroon's economic growth in the first 20 years of independence was around 7% due to bank liquidation and restructuring, as well as changes in government and fiscal policies, prudential rules, and sound banking management. As a result, Cameroon's sources of financing became limited. Cameroon's economic growth now stands at 2.8%. (Njabe Roland, 2000).

Commercial banking supports economic development in developing countries. Agriculture-Trade (2011) reports that traditional and subsistence farming employs over 50% of people living in nations in the South Pacific. According to Prasad and Roy (2007) and PSDI (2014), this group has challenges such as inadequate transportation, a lack of cash, and a lack of enterprise development initiatives. Other factors contributing to low investment include cultural and socioeconomic difficulties, as well as government regulations that increase investment costs and risks (Duncan, Sandy, & Malcolm, 1999).

Commercial banks promote economic development by encouraging savings through deposit plans, channeling inactive savings from the wealthy into profitable ventures, and supporting capital formation Rose argues that savings drive capital development, but the cost of credit is also influenced by the law of scarcity. When savings are few, credit becomes more expensive to get. (Rose, 1986)

The financial system facilitates economic transactions and connects present output with future consumption. According to the World Bank (2008), Through lending, investing, offering financial advice, and raising local funds for new business endeavors, commercial banks are essential to the development of emerging countries. A robust financial system offers crucial services for consumers and businesses, including Managing credit, payments, savings, and risks. Financial market frictions hinder rural residents' access to education and employment prospects. Banerjee and Newman's (1993)

Commercial banks contribute to a stable macroeconomic environment by adhering to central bank monetary policy directives UN-ESCAP (2005) defines this duty as providing loans to productive sectors to promote employment and entrepreneurship in the country. Financial resources and services are accessibility is a key concern for agencies for relief and development in the Pacific and globally, given the role of the banking sector in economic development A little island in the Pacific To fulfill the demands of rural households and businesses, states with weak financial systems must create and implement financial solutions. (Crockett, 2001; Mishkin, 2007). Commercial banks' involvement in real assets has steadily increased throughout the years. Commercial banks also play an important role in the transmission of government economic policies, particularly monetary policy, to the rest of the economy. The main way that the government controls the expansion of the money supply, the availability of credit, and interest rates is through the commercial banking system, where monetary policy tools are used to manipulate the reserves held by commercial banks.

Variations in bank loan availability and costs might have detrimental effects. Deflation may result from high interest rates since they increase the cost of lending. (Maduka, A.C., and Onwuka, K.O, 2013).

This is not surprising given that bank deposits account for the majority of the money supply used by the public, and changes in money growth are strongly connected with changes in the pricing of goods and services in the economy. Furthermore, such reforms may include a comprehensive process of significantly improving the regulatory and surveillance framework; fostering healthy competition in banking operations; ensuring an efficient framework for monetary management; expanding the savings mobilization base; enforcing capital adequacy; and encouraging investment and growth

through market-based interest rates. The necessity for ongoing reforms has grown in importance as global financial products have become more sophisticated. (Ogege, S., & Shiro, A. A., 2013).

Cameroon's formal banking system is less than 50 years old and originated during the late colonial era. The first bank in Cameroon was created before to independence. Prior to modern institutions, small civilizations used primitive methods for banking. Thrift and lending societies were governed by conventions and tradition. The treasurers of these associations performed similar tasks as bankers. The Cameroonian banking business has transitioned from traditional techniques to modern ones. Cameroon is a member of BEAC (Bank of Central African States) and CEMAC (Central African Economic and Monetary Community). The banking industry is regulated by laws, enactments, ministerial instructions, and presidential decrees. Banking regulatory bodies include CONAC, NCC, APECAM, BEAC, and MINEFI. Modern banking has led to the failure and recapitalization of several banks, including BMBC in 1996 and CAC in 1997. (Zhufanyi (2004).

In 2006, Cameroon's commercial bank was established, Amity Bank was acquired by Atlantic Bank, and National Financial Credit Company (NFCC) became National Financial Credit Bank (NFC Bank). Short-term lending, with a focus on self-liquidating trade financing. The central bank provides long-term loans. The banking industry underwent reorganization, culminating in the sale of the final state-owned bank in January 2000. Except for Atlantic Bank PLC, Afril and First Bank, Union Bank of Cameroon, Eco bank, Citibank, Standard Chartered Bank, NFC Bank, and Union Bank of Africa, all other banks have government shareholdings ranging from 35% to 83% and are significantly influenced by the latter. Cameroon's commercial banks carry out (African Development Bank, 2007).

Basic goods, machinery, and technology are among the many items that Cameroon imports. These things are necessary for both direct consumption and as inputs in the country's industrial processes. Because of its reliance on imports, the economy is susceptible to changes in trade policy and worldwide price movements, which can have a big effect on the nation's price levels and stability. The Consumer Price Index (CPI) serves as a key indicator to gauge inflation and living cost changes over time. As a measure of the average change over time in the prices paid by urban consumers for a

market basket of consumer goods and services, the CPI reflects the purchasing power of the currency and the economic welfare of the populace. Changes in the CPI in Cameroon can influence consumer confidence, spending behaviors, and economic policy decisions.

The interaction of these three variables the amount of imports, the consumer price index, and domestic credit from commercial banks has a significant impact on economic growth; however, thorough studies examining the ways in which these variables affect Cameroon's economic trajectory are scarce. Comprehending the interplay between these elements is crucial in devising strategies that foster sustained economic expansion. The goal of this research is to investigate these connections and offer a thorough analysis that could form the basis for Cameroonian policy-making and strategic economic planning.

1.2. Problem Statement

Like many developing nations, Cameroon's economy is heavily impacted by a number of macroeconomic factors that are essential to its expansion. Among these are the amount of imports, the impact of commercial banks on domestic lending, and changes in the consumer price index (CPI), which are thought to be important indicators of economic growth and health. Even while these aspects seem important, there is still a lack of empirical research devoted to figuring out how they together affect the country's economic growth. This study aims to close this gap by quantitatively evaluating the ways in which import levels, fluctuations in the CPI, and local loans from commercial banks support or impede Cameroon's economic growth. The goal of the inquiry is to produce a thorough analysis that will help guide strategic financial planning and policy choices that are essential to advancing the country's economic development and stability. The financial boom of Cameroon, as in lots of growing nations, hinges critically on the performance and effectiveness of its economic systems, the steadiness of its fees, and the shopping strength of its clients. but, the complex dynamics amongst domestic credit score supplied with the aid of commercial banks, import charges, and the domestic price Index (CPI) and their collective impact on financial boom remain insufficiently understood and underexplored within the context of Cameroon's financial panorama. Despite the pivotal function of industrial banks in facilitating financial sports via the provision of home credit score, there's a loss of comprehensive analysis on how

effectively this credit score is translating into sustainable economic increase. The question arises whether or not the contemporary banking practices and credit score distribution mechanisms are optimally contributing to the monetary development of the United States or if there are inefficiencies that stymie boom.

Moreover, the CPI, a crucial indicator for financial coverage making, displays the changes within the fee of dwelling and inflation however its responsiveness to shifts in financial policy or external economic shocks in the Cameroonian context has now not been safely analyzed. This gap in information and information may want to hinder the improvement of powerful techniques to manipulate financial boom. This have a look at seeks to deal with these critical gaps via inspecting the interrelations many of the domestic credit availability from industrial banks, inflation quotes, and the CPI, and their blended results at the financial boom of Cameroon. The consequences are predicted to provide empirical insights that can manual policymakers, economists, and economic institutions in formulating and implementing techniques that effectively harness home credit score, control inflation, and make use of CPI measurements to foster a greater stable and rich economic environment in Cameroon. Commercial banks are defined as for-profit, privately held financial institutions that accept deposits from the general public, protect them, and provide loans to the public Commercial banks also advise the public on investments, counsel clients on financial markets, handle foreign exchange, and issue traveler's checks. In addition, they perform a variety of other duties like agency, payment, policy, and risk management, standing by their clients to ensure that they pay off their debt in the event that they are unable to do so. The services provided by commercial banks significantly improve citizens' income and standard of living. (Zhufany, 2004, p. 96). In the 1980s, Cameroon experienced a severe economic crisis that affected all sectors, including commercial banks. Several factors contributed to the current predicament. The government acknowledged that the issue stemmed from a rapid decline in international export prices for goods and services. The most notable result was an increase in the prices of daily goods. In reaction to the economic crisis, the Cameroonian government implemented reforms to reorganize public finance and liberalize foreign trade.

This resulted in economic recovery in the late 1990s, but the economic crisis has yet to be addressed. The introduction of the SAP in Cameroon resulted in economic policy changes, including the introduction of dainties. However, as in many other

countries, the SAP has been criticized for failing to address the significant increase in poverty during the late 1980s and 90s.

1.3. Research Question

- What is the impact of loans (domestic credit) provided by commercial banks on the economic growth?
- Do imports have an impact on the economic growth of Cameroon?
- Does consumer price index affect economic growth of Cameroon?

1.4. Research Objectives

- Examine the impact of loans (domestic credit) provided by commercial banks on the economic growth.
- To assess the influence of imports on economic growth of Cameroon.
- To determine the impact of consumer price index on economic growth of Cameroon.

1.5. Hypothesis Of The Study

➤ Hypothesis one

H0: There is no relationship between loans (domestic credit) provided by commercial banks and economic growth

H1: There is a positive relationship between loans (domestic credit) provided by commercial banks and economic growth

➤ Hypothesis two:

H0: There is no relationship between imports and economic growth

H1: There is a positive relationship between imports and economic growth.

➤ Hypothesis three

H0: There is no relationship between consumer price index and economic growth

H1: There is a positive relationship between consumer price index and the economic growth.

1.6. Significance Of The Study

The main aim of this research is to investigate the relationship between commercial bank practices, inflation, consumer price index and economic growth of Cameroon. The goal of this study is to help readers better understand and use the relationship between commercial banks practices and economic growth as a guide or information to many bank sectors in Cameroon. This study will contribute to both knowledge building and practice improvement in commercial banks and economic growth. From a theoretical standpoint, the study proposes a comprehensive framework of studying changes commercial banks and economic growth. It also expected that it will aid policy makers in their effort to revamp the sector. It shall be of great relevance to the organizations under study as well as other financial institutions. The non-financial business firms, whether manufacturing or service oriented shall also benefit from the research findings

And lastly, the financial institutions will benefit from the effective strategies suggested by the study and shall enable them to develop new products that can be accessed by the majority who are small scale entrepreneurs. The borrowers on the other hand will have a better understanding on the importance of the policies and procedures applied by Banks.

1.7. Research Scope

This study investigates the relationship between commercial banks and economic growth for the specific commercial bank under discussion. Economic growth is the dependent variable, with commercial banks, imports and CPI serving as the independent variable. Commercial banks are chosen since they are publicly traded corporations, and as it is a legal necessity for publicly traded organizations to publish such information, their data is openly available. The study was undertaken at numerous commercial banks in Cameroon.

1.8. Key Terms Definition

- **ECONOMIC GROWTH:** is considered as an increase in the production capacity of a country over a given period of time (Yakubu & Affoi 2014)
- **A BANK:** an institution that deals in money and its substitutes and provides other money-related services.
- **COMMERCIAL BANKS:** refers to a financial organization that takes deposits, provides services for checking accounts, makes different kinds of loans, and gives small businesses and people access to fundamental financial products including savings accounts and certificates of deposit (CDs).
- **DEVELOPMENT:** a process that creates growth brings in progress and positive change.
- **LOANS (DOMESTIC CREDIT):** refers to borrowing of a sum of money at an agreed rate of interest, usually for specified period of time by the government, institution, a business form or an individual.
- **IMPORTS;** An import is a good or service bought in one country that was produced in another.
- **CONSUMER PRICE INDEX;** is a measure of the average change overtime in the prices paid by urban consumers for a market basket of consumer goods and services.

1.9. Thesis Organization

The following five chapters make up the structure of this study:

Chapter One

A broad overview of the study is provided in Chapter 1 to help readers better understand commercial banks and economic expansion. There is a background after this. After then, the problem statement is discussed. Additionally, the study's goals and research topics are outlined. The designation of important variables is the next step. The study's importance is then discussed in order to determine the extent of the current investigation in Cameroon. The final element is the chapter organization. The conclusion, which provides a summary of all the topics covered in the chapter, marks the end of the first chapter's final portion.

Chapter Two

The second chapter of the study, which was carried out by a number of additional researchers and professors, contains their conclusions following a thorough investigation in addition to their definitions, interpretations, and arguments. Both the research framework and the hypothesis that directed the construction of the model are expressed in the research framework, which forms the basis of the study.

Chapter three

The planning and concepts that went into the data collection procedure are covered in the third chapter. The study methodology and procedures that acted as the guidelines for the research are covered in detail in this part. The researcher provided information about the sample that made up the study's participants as well as the sampling procedure utilized to choose respondents. Additionally, the researcher explained their approach to gathering data and the equipment they would need to do so.

Chapter four

An extensive analysis of the various stages employed in the research study is provided in the fourth chapter. The variables employed and their operational meanings are thoroughly examined in this chapter. There is also a detailed discussion of the various data gathering procedures and the general study concept. Data analysis methods and other statistical tests used on data are also covered in this field of study.

Chapter Five

The fifth chapter contained all discussions of the conclusions and findings of research analysis are provided in this chapter, along with suggestions.

2. CHAPTER TWO: LITERATURE REVIEW

2.1. Introduction

The chapter provides an overview of the body of research on how the banking industry and the expansion of the financial sector in general influence economic growth. Thus, the chapter will start by outlining the development of the banking sector before giving a summary of the banking sector in Cameroon and the various theories that explain how credit and banks contribute to economic growth. In addition, the section will discuss empirical studies on the topic conducted in different countries, with a focus on the factors assessed, the techniques employed, and the outcomes attained. The section will end with an evaluation of the research done on Cameroon, highlighting any differences in the literature and giving more evidence for the study's needs

2.2. Concept Of Banking Sector Development

Recent years, the size and depth of the banking system were the only indicators of the banking sector's development. This ignored factors like the banking system's stability and resistance to negative shocks, its ability to provide banking services and products to a wider audience, and its efficiency in the process of financial intermediation. Conventional measurements of banking sector development only take into account the ratios of broad money supply (M2) to GDP and private credit to GDP, which are commonly employed to assess financial development's impact on economic growth. Traditional measurements sometimes overlook a bank's branch and ATM network, average loan and deposit size, return on assets, net interest margin, capital adequacy ratio, non-performing loans (NPL), and liquid assets ratio. These measurements determine the size, depth, efficiency, and stability of the banking industry. (Bank Word, 2006)

The Ottoman Bank and the Commercial Bank of Africa emerged in 1955. The Cooperative Bank of Kenya gained its recognition in 1968. The Ottoman Bank changed its name to the National Bank of Kenya in 1968. Moreover, the recently established Stanbic Bank, formerly known as Grindlays Bank International Ltd., and the Merchant Bank Company. Barclays Bank International Ltd., a fully owned subsidiary of British

Barclays Bank Ltd., replaced Barclays Bank (DC) in 1971. First National Bank of Chicago and First National City Bank of New York were the first two American banks to open in Kenya (Juma, 2016).

2.3. Overview of The Cameroon Banking Sector

The study provides an overview of Cameroon's banking institutions and financial development. Cameroon lies in central Africa and shares borders with several key countries. Cameroon shares borders with Nigeria to the northwest, Chad to the northeast, Central African Republic to the east, Equatorial Guinea and Gabon to the south, and Republic of Congo to the southeast.

Cameroon is also part of the Sub-Saharan African (SSA) zone. The population is expected to reach 26.5 million in 2020 (World Bank Data, 2022).

Cameroon is a member of key economic and financial blocs in the Central African Subregion. The country belongs to the Economic and Monetary Community of Central African States (CEMAC) and has a central bank that oversees all banking and financial institutions in the region (Isoh, 2020). The central bank, Bank of Central African States (BEAC), is headquartered in Yaoundé. The central bank regulates commercial banks, non-financial institutions, postal banks (CAMPOST), insurance firms, and the Douala Stock Exchange. BEAC is the central bank for six member states: Cameroon, Equatorial Guinea, Gabon, Chad, Central African Republic, and the Republic of Congo. In October 1990, BEAC established the Central African Banking Commission (COBAC) to supervise and regulate the region's banking industry (Njimanted et al. 2017). Central banks typically collaborate with state finance ministries to implement macroeconomic policies (African Development Bank-AFDB, 2006).

Between 1995 and 2017, the number of banks expanded from 8 to 15. Credit communautaire d'Afrique (CCA) became a commercial bank. Both domestic and international banks make up these banks. According to estimates from 2008, foreign banks owned 56.9% of financial institutions in Cameroon, compared to 9.8% owned by public banks and 33.3% by national banks. A sizeable portion of Cameroon's financial sector is derived from the banking sector. It made up around 85% of the assets in the financial sector overall in 2005.

A total of 19.6% of the GDP came from this. Even though Cameroon's financial system is still in its infancy, it dominates the CEMAC region, accounting for over 55% of the region's total financial assets as of 2005 (Puatwoe & Piabuo, 2017).

Although the financial sector in Cameroon is still not well-developed, it encompasses the largest financial sector in the CEMAC zone and contributes about 55% of CEMAC's financial assets in 2005, the bulk of which is from the banking sector.

- **Regulatory Environment:** Cameroon's banking sector is regulated by the Bank of Central African States (BEAC), which is part of the Central African Economic and Monetary Community (CEMAC). The regulatory framework is designed to ensure stability and consistency in monetary policies across member countries.
- **Key Players:** Major banks in Cameroon include Afriland First Bank, Ecobank Cameroon, Standard Chartered Bank Cameroon, and Société Générale Cameroun. These banks provide a range of services, including retail banking, corporate banking, and international banking.
- **Services Offered:** The banking sector in Cameroon offers a variety of financial services, including savings and current accounts, loans, mortgages, and investment products. Banks also play a crucial role in facilitating international trade and foreign exchange transactions.
- **Financial Inclusion:** Efforts have been made to promote financial inclusion in Cameroon, with initiatives to expand access to banking services in rural areas. Mobile banking and digital financial services have gained traction, contributing to increased financial accessibility.
- **Challenges:** Like many other African countries, Cameroon's banking sector faces challenges such as limited access to financial services in rural areas, the need for technological advancements, and concerns related to regulatory compliance.
- **Economic Impact:** The banking sector plays a crucial role in supporting Cameroon's economic development by providing financing for businesses, facilitating trade, and contributing to overall economic growth.
- **7. Financial Stability:** The stability of Cameroon's banking sector is closely monitored by regulatory authorities to ensure the soundness of financial institutions and maintain overall financial stability in the country.

2.4. Commercial Banks

The concept of commercial banks, their operations, and words related to them are covered in the first three sections of this section. Foreigners, governments, and individuals own commercial banks. After colonization, foreign commercial banks were established in Uganda to encourage trade and exports. Grindlays Bank, established in Entebbe in 1906, Standard Bank in 1912, and Barclays Bank are examples of those banks. At the moment, the nation is home to a large number of commercial banks that safeguard deposits and lend money on behalf of customers. Commercial banks can be owned by the government, private citizens, or foreign entities (Ditcher, 2003).

Previous government and donor-funded rural lending schemes failed to reach impoverished farmers and landless households in rural areas, resulting in the rise of commercial banks. Small business owners who are targeted by commercial banks often lack the necessary collateral for loan acquisition in the banking industry.

Schroeder (1999) contends that. In remote areas, commercial banks may be more effective than development banks in terms of operations and expansion. Banks' lack of rural lending experience may provide a significant impediment to entering rural markets. Expansion of lending operations under supply-led regimes sometimes results in poor performance and deteriorating payback rates. This is due to sacrificing the quality of borrowers and loan portfolios for quantity.

2.4.1. Definition Of Commercial Bank

A commercial bank is a financial organization that takes deposits, offers checking account services, loans, and basic financial products like certificates of deposit (CDs) and savings accounts for people and small businesses, according to Julia Kagan, reviewed by anything. Commercial banks, not investment banks, are where most people do their banking. Commercial banks make money by lending money and collecting interest. Mortgages, auto loans, business loans, and personal loans are just a few of the loans that commercial banks provide. A commercial bank might focus on particular loan kinds. To finance loans, banks rely on deposits from customers in checking, savings, money market, and certificate of deposit accounts. Customers who deposit money into

these accounts effectively lend to the bank and receive interest. Banks pay lower interest rates on borrowed funds than on loans. (Anderson, 2020).

2.4.2. Operations Of Commercial Bank

The difference between interest paid on deposits and interest earned on loans made by a commercial bank is known as net interest income. Customers select CDs and savings accounts from commercial banks because of their convenient withdrawal alternatives and FDIC guarantee. When compared to mutual funds and other investment products, these investments usually have lower interest rates. Checking accounts are among the commercial bank deposits that don't pay interest. This is the only way that lending organizations may create a limited amount of credit. A minimum percentage of deposits must be held by banks as liquid cash. The reserve ratio is the term for this. The reserve ratio in the USA is 10%, banks must retain \$10 for every \$100 in deposits, while the remaining \$90 can be used for loans or investments. (G. Anderson, 2020)

➤ Deposits

Together with interest payments, deposits which account holders send the bank for storage and future transactions are the main sources of funding for banks. A lot of individuals own checking and savings accounts, also referred to as "core deposits". The majority of deposits are made for very little time. Even after years of banking with the bank, customers are still able to withdraw the whole amount from their accounts at any time. Bank expenses are minimized because customers can take out money whenever they want to, and the amount is fully insured up to \$250,000. Banks provide savings accounts with interest rates substantially lower than those of U.S. Treasury bonds, and occasionally they pay little or no interest on checking account balances. (Maduka and Onwuka, 2013).

➤ Wholesale Deposits

A bank may go to wholesale sources for funding in the event that its core deposits are insufficient. Interbank CDs and wholesale funds are similar products. Investors should assess a bank's reliance on wholesale funds even though they are a legitimate source of finance. Banks that place a higher priority on wholesale funding than on collecting deposits from branches could be less competitive than their peers. Investors

should be aware that rising wholesale funding costs put banks in a position where they have to decide whether to pursue higher yields through lending and investing, which can sometimes include higher risk, or narrowing interest spreads and lower profitability. (Marius Niba Ikome Njinyan, 2011).

➤ **Consumer Lending**

Residential mortgages are the most prevalent kind of collateral used by banks in North America, which mostly lend to consumers. Mortgages typically have 30-year payback terms and can have variable, adjustable, or fixed interest rates. For many banks, a sizable portion of secured lending is dedicated to auto loans. Loan terms are often longer and have higher interest rates than mortgage financing. When it comes to lending money for cars, banks face intense competition from other financial institutions, including captive financing businesses owned by automakers and dealers. Before the housing bubble burst, home equity lending was a rapidly expanding consumer lending area for many banks. People can borrow money for any reason by using the equity of their property the difference between the appraised value and the amount owed on an outstanding mortgage as collateral for a property equity loan. More students are taking out loans to cover the rising cost of post-secondary education.

One well-known lending kind with an intriguing history is credit cards. Credit cards serve as individualized credit lines that are available for use at any time. Despite being well-known credit card companies, Visa and MasterCard do not provide loan underwriting services. Thembi (2012)

2.5. Theoretical Framework

This section will cover four theories on economic growth. These theories include:

- Classical model
- Neo - classical model of Solow/Swan
- New Economic growth theories (Endogenous growth)
- Unified growth theory

2.5.1. Classical Model

According to Pettinger (2019) cites Adam Smith's *Wealth of Nations* (1776) as the foundation for the classical model, which was then adopted by Ricardo and Malthus. Smith identified various elements that contribute to economic growth, including the impact of markets on supply and demand. Labor productivity. Smith maintained that income per capita is decided by the skill, dexterity, and judgment with which labor is used in any nation (*Wealth of Nations* 1.6). He also emphasized the role of rate in permitting higher specialization. Modern factories use specialization and economies of scale to boost production returns.

According to Would Kenton (2019), the classical growth theory postulates that population expansion and finite resources would cause economic progress to slow down or stop. It also holds that temporary increases in real GDP per person can trigger population explosions, which would lower real GDP. The economists who developed the theory used the concept of "subsistence level" to model their theory, where profits were generated when income exceeded subsistence levels, which considered the various ways that different social classes used their wages.

Economists assumed that increasing real GDP above the subsistence level would lead to population growth, causing real GDP to fall back to that level. This hypothesis assumed that real GDP would always reach an equilibrium level. If real GDP falls below the subsistence level, it may lead to population decline and a return to subsistence income.

2.5.2. Neo - Classical Model Of Solow/Swan

According to Pettinger (2019), Solow devised the Neo-Classical model. According to the hypothesis, returns decrease as labor or capital increases. Economic growth is impacted in the short term by rising capital. Consistent economic expansion is the result of increasing capital. According to the Solow model, in order to accelerate economic growth, we need:

- Convergence on a steady-state growth rate and diminishing returns may result from increasing the percentage of GDP invested.
- Improvements in technology result in higher labor and capital productivity.

- Poorer countries that spend more may experience economic growth coverage similar to wealthy countries.

2.5.3. New Economic Growth Theories (Endogenous Growth)

Human capital was given priority in the endogenous growth models developed by Paul Romer and Robert Lucas (Pettinger, 2019). Technical breakthroughs can be accelerated by personnel having more education, training, and experience. They underlined how important it is for the government to support technological innovation. The classical free market theory contends that because of competition, companies might not be highly motivated to invest in innovative technologies. The model:

- Focuses on enhancing Productivity of both labor and capital
- Research suggests that boosting labor productivity can lead to higher returns rather than lower ones.
- They contended that growing capital does not always result in lower returns, as Solow predicts. The answer varies based on the type of capital investment
- Knowledge-based economies place a greater emphasis on spillover benefits.
- The focus is on free markets, minimizing rules and subsidies. The concept suggests that economies should remain adaptable to changing circumstances

According to Joseph Schumpeter, capitalism relies on 'creative destruction', which involves enabling inefficient enterprises to fail and redirecting resources to more effective ones.

2.5.4. Unified Growth Theory

Tejano Pettinger (2019) discusses Oded Galor's unified growth theory, which combines various aspects of economic growth.

- Economic stagnation lasted until the 18th century.
- The first industrial revolution marked the beginning of economic progress.
- Human capital formation and economic growth.
- Explaining differences in economic growth between countries.

2.6. Hypothesis Development

2.6.1. The Impact Of Loans (Domestic Credit) Provided By Commercial Banks On The Economic Growth.

The total amount of money that commercial banks lend to people, companies, and the government for investment and consumption is known as credit. Businesses and industries borrow money to invest in machinery and equipment, individuals receive credit for both investment and consumption, and the government borrows money for both capital and ongoing expenses. More precisely, credit is defined as when a creditor or lender provides resources to a borrower or debtor, such as a loan, and the borrower does not immediately repay the lender, creating a debt, but instead makes arrangements to return or repay the resources at a later time (Mishra, 2009).

By raising the savings rate, mobilizing and pooling funds, generating investment data, facilitating and promoting foreign capital inflows, and optimizing capital allocation, bank loan to the private sector fosters economic growth through capital accumulation and technical advancement. One important measure of a nation's financial development is the private sector credit to GDP ratio. Bank credit to the private sector is thought to be more effective at promoting economic expansion than bank credit to the government. (World Bank, 2013)

Credit has a crucial role in promoting economic progress, particularly in emerging countries. As a result, the importance of bank lending in economic development has been accepted.

Many scholars believe that economic agents can invest in a variety of chances. Ethiopia's government aims to achieve significant economic growth. The National Bank of Ethiopia (NBE) believes that monetary policy should also promote growth. NBE encourages commercial banks to provide credit to the productive sector. The credit channel of monetary policy is regarded as very essential and successful in Ethiopia. Concluded that bank loan to the private sector had a significant positive impact on economic growth in Nigeria (Okwo, 2012).

According to Obamuyi, Edun, and Kayode (2010), commercial bank lending has a significant impact on economic production. More financing typically leads to increased investment in goods and services, resulting in higher GDP. Reduced

commercial bank lending leads to decreased investment in goods and services, resulting in a contraction of GDP. This highlights a positive correlation between commercial bank lending and economic growth.

Louzis, Vouldis, and Metaxas (2010) found that lending does not always lead to economic growth. Loans' impact on economic growth depends on their setting. Loan management by both commercial banks and borrowers had an impact on this connection.

Based on the findings, this study predicts a correlation between bank loans and economic development, but cannot determine if it is positive or negative. Wicksell's thesis from 1901 suggests that lending should be encouraged when interest rates are lower than the marginal productivity of capital, as it stimulates economic growth. Higher interest rates might discourage borrowing and impede economic growth. This study suggests a link between commercial bank lending and economic growth, however the specific relationship may vary depending on the environment. Imran and Nishat (2012) used the ARDL model to investigate the "Determinants of Bank Credit in Pakistan: A Supply Side Approach" from 1971 to 2010. The study concluded that in the long run, foreign liabilities, domestic deposits, economic growth, exchange rates, and monetary conditions (proxied by M2 as a percentage of GDP) have a significant and positive relationship with private credit, whereas inflation and money market rates have no effect on it. Similarly, in the short run, all variables are substantial and positively associated with private credit with the exception of domestic deposits and inflation, which have no effect on private credit in Pakistan.

Olokoyo (2011) studied the "determinants of commercial banks' lending behavior in Nigeria" from 1980 to 2005. It means that the volume of deposits and the lagged volume of commercial banks' loans and advances, investment portfolio, GDP, and foreign exchange are substantial and positively correlated with loans and advances. The author also considers other key variables such as lending interest rates, cash reserve requirements, and liquidity reserves. These characteristics have a beneficial effect on the loan and advance, although not considerably so. The minimal influence of cash reserve requirements on loan and advance is due to the fact that commercial banks may not always convert a smaller proportion of their funds available for lending.

Djiogap and Ngomsi (2012) used a panel data model to investigate the "determinants of bank long-term lending behavior in the Central African Economic and

Monetary Community (CEMAC)" from 2001 to 2010. The study discovered that bank size, bank capitalization, long-term liabilities, and GDP are all robust and have a beneficial impact on long-term bank credit to businesses, while inflation has no effect. Vodova (2008) conducted a study titled "Credit market and prediction of its future development in Czech Republic" from 1994 to 2006, utilizing disequilibrium models to determine the important elements that influence demand and supply of credit.

Historically, commercial banks supplied short-term loans for labor, production, and inventory, while investment banks offered long-term loans for capital asset financing.

Commercial banking requires low risk due to the necessity to maintain parity between deposits and currencies. Commercial banks rely heavily on equity and cash reserves, making it difficult to sustain losses on loans above a few percentage points. This raises concerns about the bank's viability, leading to liquidity issues and cash runs. Investment banks can balance risk and return by profiting from excellent deals to offset losses from bad ones (Mazzucato, 2015).

Commercial credit typically includes four forms of loans: asset-based loans, cash flow loans, trade financing agreements, and leases. These loans are all senior and secured, although the collateral used varies. The separation of commercial credit is widely recognized in practice, but only partially recognized in academic research (Ivashina, Leaven, Moral-Benito, 2020).

In mainstream macroeconomics, there is a rising focus on credit markets and their impact on the economy. Following the 2007 global financial crisis, there was a considerable increase in interest. This is a significant advancement in economic theory, which has previously focused on business cycles without considering their relationship with finance cycles. However, Bianco and Sardoni argue that orthodox macroeconomics did not fully recognize the impact of credit markets on the actual economy before to the crisis.

In economically mature countries, loan provision has become as public--if not more so--than government money printing. It is imperative to manage the credit system in the benefit of all people and ensure equitable access to credit for all economic categories. Limiting central banking operations to specific credit advances is ineffective.

Future credit policies should prioritize maintaining a balance among various credit demands. (Youngman, 1922)

Schumpeter claimed in 1911 that financial intermediaries' functions, including mobilizing savings, appraising projects, controlling risk, supervising managers, and enabling transactions, promote technical innovation and economic development (King & Levine, 1993).

Bank credit promotes economic growth in a variety of ways. Credit plays a crucial role in money transmission, financing production, consumption, and capital development, ultimately influencing economic activity. A well-regulated financial system can significantly improve the transmission mechanism of monetary policy and help achieve its aims. Giving the private sector more credit in a disciplined banking environment can boost the economy's productivity and development possibilities. This leads to economic growth, job creation, and increased competitiveness. (Basyal, 2009)

According to Ademu (2006), credit can help prevent economic collapse after natural disasters like floods, droughts, diseases, or fires. Farmers use finance to boost agricultural productivity by investing in seed, fertilizers, tractors, and pump sets. Using loans can boost industrial productivity. Furthermore, credit is required for the service sector to grow. Credit is essential for the growth of all GDP components. Banks play a crucial role in promoting economic growth by facilitating genuine investment. (Kinnon, 1973)

Sustainable economic growth relies on increasing the accumulation of physical and human capital, optimizing productivity, and ensuring equitable access to these assets this is only possible with access to bank finance. Banks operate as financial intermediaries by collecting deposits from the surplus sector and lending them to diverse sectors of the economy, promoting economic growth. One of the primary functions of banks is to extend credit. (Fitzgerald, 2006).

2.6.2. Relationship Between Imports And Economic Growth Of

Cameroon

Economic growth was a major focus of previous research, both theoretically and empirically. Various empirical studies tried to determine the significant factors

determining economic growth and most of these studies were associated with the determinants or sources of economic growth with different methodologies, data, and cases. Tong (1995) explored the relationship between economic growth and import, and he recognized that import at different times contributed to economy differently, but as a whole, there was a positive correlation between import and economic growth. Frankel and Romer (1999) in their study on cross-country data found that higher trade contributes to long-term economic growth, after accounting for the effect of growth on trade. Although they considered total trade (export plus import), their research methodology attributed the same response to import that it applies to export; that is, import causes economic growth. Humpage (2000) on the other hand, stressed that import does not lower economic growth. He believed that import and economic growth are positively correlated, with causality running in both directions.

Faster economic growth does indeed lead to higher import, but the countries that are opened to trade tend to grow faster than those with a closed economy or less accessible. Liu (2001) in his research revealed that import has a strong role in the promotion of national economy by analyzing the data of China from 1980 to 1998. Howard (2002) examined the relationship between export, import and income in the economy of Trinidad and Tobago, using the methodology of Granger causality and error correction modeling.

The results showed that there is unidirectional Granger causation from export to income (GDP), and bidirectional causation between export and import, and causality running from GDP to import. Chen (2009) in a different study stated that, import is often recognized as a leakage of revenue of which will lead to unemployment rather than economic growth. But he stressed that the impact of import on economic growth on the other hand, should not be ignored. Import is an important mean to break the bottleneck of economic development and promote economic growth. Therefore, the research on the relationship of import and economic growth is necessary. Gao (2004) showed that the relationship between foreign trade and economic growth is one of the main debating problems in the economic field. Based on his study, he found that both export and import improve economic growth, while the promoting effects on economic growth of export are much weaker than those of import. Shirazi and Abdul Manap (2005) found the feedback effect running from import to GDP growth in Bangladesh as the consequences of technology transfer. Ghorbani and Motallebi (2009) studied and analyzed the import

demand function in Iran for the year 1960 to 2005, and found that import demand is elastic related to increasing in gross domestic income. Alam, Uddin and Taufique (2009) in their paper attempted to explore the import of Bangladesh which is one of the most significant factors responsible for unfavorable trade balance of the country. The paper examined the existence of the gravity theory for the import of Bangladesh with its eight major trading partner countries such as India, China, Singapore, Japan, Hong Kong, South Korea, USA and Malaysia by using yearly panel data from 1985 to 2003. The paper found mixed results for the impact of Bangladesh GDP on its import. If population is not considered, GDP shows positive relationship with import. In addition, its major trading partner countries' GDP has significant positive impacts on the import of Bangladesh. Azgun and Sevinc (2010) in a different study explained that in the smaller and open economies, import and foreign trade play major roles in economic development and growth. Engle-Granger test was conducted, but the results showed no relationship between import and export.

2.6.3. Relationship Between Consumer Price Index and Economic Growth of Cameroon

The Nigeria economy and of course the world have witnessed sharp swings during the 1982, 1994, 2008, 2016 and 2020 global economic crises periods. The inescapability of each of these domestic and universal economic challenge has implications on the ability to measure effectively potential and actual national productivity. Therefore, in order to successfully tackle the problem of comprehending the current condition of economic activity for policy decisions, a forecasting framework is required.

Since macroeconomics is an empirical course, it can be confirmed by experience or observation rather than theory. Given this, measuring the economy using the gross domestic product (GDP) is the first step in comprehending macroeconomic phenomena. GDP is still a crucial quantity that influences and is dependent upon a wide range of other variables, necessitating regular analysis and forecasting. The GDP, which is calculated by adding up the production of various commodities and services, including homes, cars, fruits, computers, steel, banking, insurance, and all other new goods and services produced in the current year, is usually used to determine the size of a country's

overall economy. The value of the naira is then calculated using market prices. GDP is usually referred to when an economist discusses the size of an economy.

Therefore, Makinde, Adepetun and Oseni (2020) viewed GDP as an internationally accepted measure of economy size and strength. Measuring GDP tells us an enormous amount about how a nation is doing. If the GDP is rising, it signifies that incomes are rising, and consumers are purchasing more, and all of this means a stronger and bigger economic activities.

According to Khamis, Razak and Abdullah (2018), GDP growth rate measures the percentage change in gross domestic product from the previous periods such as monthly, quarterly or annually.

2.7. Empirical Review

Existing empirical evidence shows that the influence of banking sector development on economic growth varies among jurisdictions. In this regard, although some studies found that financial development led in an increase in GDP growth in the economies of the nations they studied, others discovered that economic growth is a catalyst for banking and financial sector development. Conversely, there is empirical data, demonstrating that other academics have failed to establish a link between banking sector development and economic growth in the nations they studied. Based on the current literature, it is possible to conclude that there is no clear-cut association between banking sector expansion and economic growth, but this varies per country.

Saini and Sindhu (2014) conducted study on the impact of CBs on the ED in India. Local agriculture participation contributes significantly to the Indian economy. CBs provide direct investments to individuals by providing a savings channel. Customers can obtain loans by depositing cash, which they can then use to fund their businesses. They also increase access to finance for farmers in rural areas who are actively engaged in agriculture, hence supporting economic development. CBs can boost their earnings by trading both within and beyond the country, generating foreign revenue for the country. Effective and efficient banking systems supply capital to people and regulate the movement of capital.

Akubu and Affoi (2014) investigated how the CBS of Nigeria contributed to ED in Nigeria. The study sought to investigate the role of CBS in the execution of ED. The researcher was able to interview ten management officials. Through interviews, conclusions were reached on the findings. The researcher also gathered records from 1992 to 2012 and used them to make conclusions. The findings show that CBS, like any other private sector internationally, causes EG. It primarily boosts the country's GDP, resulting in increased ED.

A research by Marius Niba Ikome Njinyan (2011) [9] evaluated the contribution of commercial banks on Cameroon's economic expansion. This study's primary argument was that the government ought to support Cameroonians' saving habits, liberalize the banking industry, and lessen the tax burden on commercial banks. She evaluated the contribution of commercial banks to Cameroon's economic growth using a regression model.

2.8. Research Gap

There have been several of domestic and international studies on the relationship between commercial banks development and economic growth. Whereas earlier research focused on only one in order to produce a more thorough understanding of the relationship between commercial banks development performance, this study will incorporate three additional commercial banks development measurement tools. The results of this study are expected to be richer than those of several other studies, which narrowed their attention to a single time point without taking into consideration factors that highlight the dynamic character of commercial banks development relationships over time.

2.9. Summary

The literature assessment indicates a consensus among working capital management models that debt impacts economic growth. However, the effect changes based on the situation some studies indicate a strong correlation between commercial bank lending and economic growth, while others suggest a causal relationship. Other research indicates a weak or non-existent link. Kenya's history of extending access to

credit as a means of promoting economic growth provide an opportunity to examine the effectiveness of this policy. Further research is needed to determine the correlation between debt and Kenya's economic growth. This serves as incentive for this investigation.



3. CHAPTER THREE: RESEARCH METODOLOGY

3.1. Introduction

This study's current section explores all the research's many steps. Together with operational definitions, This chapter provides a comprehensive breakdown of every variable. employed. A detailed discussion is also given to the main study concept and the various data collection methodologies. Additionally, data analysis methods and other statistical tests applied to data are covered in this field of study. This chapter outlines the research methods used to determine the impact of macroeconomic variables (imports and CPI) and the banking industry on Cameroon's economic growth. To this end, the section begins with an explanation of the econometrics approach applied and a presentation of the model specifications. Subsequently explanations are provided for the data used, the time span covered, the source, and the frequency.

Additionally, the section justifies the variables used, the sampling strategy taken into consideration, and the techniques used to evaluate the data gathered. The research's validity, dependability, and limits are highlighted as the section comes to a close.

3.2. Research Design

The rational arrangements for obtaining statistics for the study topic from an outside source are part of the study's design. A survey can be used to gather information by employing a variety of techniques (Sekaran & Bougie, 2010). We used relevant public data and information from global banks for our analysis. Time-series experimentation may have been the research design employed in this study. The 49-year study period will span from 1970 to 2019. Over the course of these 49 years, data may be gathered for four variables: GDP, imports, consumer price index, and home credit score all of which are provided to the financial system by corporate banks.

3.3. Specification of The Model Method of Data Analysis and Investigations

Based on an empirical literature study, the model specifies the interaction between macroeconomic parameters in the banking sector, imports, and the CPI on

development and economic expansion throughout several jurisdictions. With a few minor adjustments to fit the Cameroonian context, the model is specified similarly to the studies that also looked at the long-term relationship between the growth of the banking sector and economic growth, such as Aurangzeb (2012), Petkovski and Kjosevski (2014), and Ojiegbe et al. (2016). This illustrates how closely the model's requirements align with pertinent research carried out in various jurisdictions. The general formulation of the regression equation is shown below:

$$\text{GDP}_t = \beta_0 + \beta_1 \text{DC}_t + \beta_2 \text{IMP}_t + \beta_3 \text{INFL}_t + \epsilon \quad (1)$$

Where:

GDP_t Represents Gross Domestic Product at time *t*;

DC_t Represents domestic credit at time *t*

IMP_t Represents imports at time *t*

INFL_t Represents inflation or consumer price index at time *t*

ε represents the Error Term, which includes all additional variables that affect GDP but were left out of the model.

Regression analysis will be used in the study as a way to examine the information gathered. We chose this analysis for the following primary reasons: first, it will aid in the development of a regression model that shows the amount of imports, domestic credit, and CPI that commercial banks have contributed to the economy on charges in GDP. Second, regression analysis is crucial because it allows us to quantify and assess the degree of correlation between GDP, imports CPI, and domestic credit.

The process of adding inaccurately gathered or coded data to a data set is known as data analysis. The 2 most important requirements in the data analysis process are editing and coding. The time series program was chosen to analyze the data collected in this study. The most difficult aspect of quantitative research is data analysis.

According to G. Zikmund, J. Babin, C. Carr, and Griffin (2010), descriptive analysis is the basic transformation of data that describes the basic characteristics such as tendency, distribution, and variability. Means, medians, modes, variance, range, and standard deviation are all commonly used statistics in descriptive statistics. In the study, we used frequency analysis on a set of data, which allowed the researcher to easily

transform the data into a bar chart, pie chart, or histogram based on each variable. This analysis simply describes the information gathered through the questionnaire. A histogram is a graphical representation of a frequency distribution in which the height of a bar corresponds to the observed frequency of a category (G.Zikmund, J.Babin, C.Carr, & Griffin, 2010). A bar chart is a basic numerical comparison that displays data in the form of bars, either vertically or horizontally. A line chart is a line design that divides each sector. Each sector describes the data set in proportion to its percentage. To complement the regression analysis, the study will also employ the descriptive approach of data analysis. The mean, standard deviation, variance, and covariance are some of these descriptive data analysis techniques.

3.4. Measurement of Variables or Justification of Variables

3.4.1. Commercial Banks Development and Macro-Economic Factors (Imports And Cpi) (IV)

Kasiva (2012) studied how risk-based audits affect financial performance in Kenyan commercial banks. This study used a correlational research approach to describe current trends, occurrences, and the relationships between various components. The study surveyed 44 financial officials, internal auditors, credit officers, relationship officers/managers, and accountants from Kenyan commercial banks. This study relied on primary data acquired through questionnaires. Data was analyzed using descriptive statistics, including mean, standard deviation, and frequency distribution. Data was presented using pie charts and tables for easy comprehension and interpretation.

In commercial banks. The study suggests that Kenyan commercial banks should implement risk-based auditing practices, including risk assessment, management, planning, standards, and staffing, to improve financial performance.

3.4.1.1. Loans (Domestic Credit)

Some G. Anderson (2020) found that loans constitute the predominant source of income for most banks. Loans often have fixed terms and rates, and are secured by real property, frequently the property being purchased. Banks typically avoid variable or adjustable interest rate loans, as they can be challenging to match with suitable funding

sources. However, borrowers can commonly return loans early with little penalties. A bank's lending process involves assessing a borrower's creditworthiness and setting interest rates accordingly. Banks assess a borrower's income, assets, debts, and credit history while considering a loan application.

3.4.1.2. Macro Economic Factors

➤ Imports (Iv)

Imports check with goods and offerings bought with the aid of a rustic from foreign resources and taken into its home territory for intake, investment, or manufacturing functions. Imports play a crucial function in global alternate principle, specifically in fashions consisting of the Ricardian version of comparative benefit and the Heckscher-Ohlin version. those models suggest that countries specialize in producing goods and offerings wherein they have got a comparative benefit and rely on imports to obtain items and services they cannot efficaciously produce domestically.

The inclusion of imports as an impartial variable in our evaluation is based at the speculation that adjustments in import ranges can have vast results on diverse economic outcomes. specially, we count on that higher ranges of imports will be associated with elevated economic hobby, extra market opposition, changes in domestic production patterns, and shifts in customer behavior. Import records are normally accumulated and pronounced through countrywide statistical companies and worldwide organizations which include the world trade Organization (WTO) and the international financial Fund (IMF). even as import information are commonly dependable, researchers must remember of ability problems inclusive of data discrepancies, valuation methods, and class errors. within the context of our studies query [provide specific context], imports are particularly applicable as they replicate the extent of a country's integration into the worldwide financial system, its alternate relationships with other countries, and its publicity to global market forces. analyzing import stages lets in us to evaluate the impact of globalization, alternate guidelines, and outside shocks on domestic economic performance. it's important to consider opportunity causes or confounding factors which could influence the connection between imports and the effects of hobby. those elements ought to consist of domestic policy interventions (e.g., price lists, subsidies), change fee fluctuations, global monetary conditions, and deliver chain disruptions. we can

manipulate for those elements in our evaluation to isolate the impact of imports. By means of including imports as an impartial variable in our analysis, we aim to contribute to the knowledge of how adjustments in import degrees affect various components of economic interest, market dynamics, and policy outcomes. This evaluation will offer valuable insights for policymakers, businesses, and researchers looking for to navigate the complexities of global trade and monetary globalization.

➤ **CPI (IV)**

The Consumer Price Index (CPI) is a metric used to monitor how average costs for a variety of products and services—such as food, housing, transportation, and healthcare—change over time for urban consumers. Theories of consumer behavior, macroeconomic analysis, and monetary policy all revolve around the CPI. It functions as a crucial gauge of inflation, a notion central to monetary theory and macroeconomics. Consumer purchasing power changes are reflected in changes in the CPI, which can have a big impact on income inequality, economic growth, and the efficacy of monetary policy.

The idea behind using the CPI as an independent variable in our study is that shifts in consumer prices will have an impact on a range of economic outcomes. More specifically, we anticipate that rising inflation, as measured by an increase in the CPI, will be linked to declining buying power, altered consumer habits, modified borrowing rates, and altered decisions about investment and output. National statistics agencies, like the Bureau of Labor Statistics (BLS) in the US, usually use strict procedures and sample strategies to gather and publish CPI data. Although CPI data are typically trustworthy, researchers should be mindful of potential drawbacks such sample biases, substitution effects, and quality changes that could compromise the index's accuracy.

The Consumer Price Index (CPI) holds significant relevance in the context of our research question [give specific context] as it offers valuable insights into inflationary pressures within the economy and reflects changes in consumer cost of living. We can evaluate the effects of supply-demand dynamics, monetary policy actions, and external shocks on financial markets, corporate operations, and consumer welfare by examining CPI patterns. It's critical to take into account any competing theories or confounding variables that might affect how the CPI and the relevant outcomes are related. Changes in consumer tastes, exchange rate variations, price swings in commodities, and policy

changes at the government level could all be contributing causes. In our analysis, we will account for these variables in order to separate the impact of the CPI.

We hope to further our understanding of how changes in consumer prices impact many facets of economic activity, consumer behavior, and policy outcomes by incorporating the CPI as an independent variable in our research. Policymakers, companies, and scholars looking to combat inflationary pressures and advance economic stability and wellbeing will find great insights in this work.

3.4.1.3. Economic Growth (DV)

Positive real GDP growth is correlated with higher income levels, according to empirical data. By doing this, the borrower's capacity to repay loans is improved, and bad debts are decreased. Bad debts often increase during economic downturns, which are characterized by weak or negative GDP growth. The relationship between cycle phase and credit defaults is supported by empirical studies. Salas and Saurina (2002) discovered that the NPL ratio is significantly impacted negatively by GDP growth, suggesting that macroeconomic trends have an immediate effect on loan serviceability.

3.5. Sampling

Only the years 1970–2019 are included in the chosen sample.

3.6. Data Analysis Methods

The autoregression distributive lag modelling (ARDL) approach, which was previously utilized in a related study by Kiprop et al. (2015), was used in this study to examine the relationship between commercial banks, macroeconomic factors, and economic growth. Pesaran and Shin (1999) listed numerous arguments that support the selection of this model. First off, this method makes it possible to estimate long-run and short-run coefficients simultaneously. Second, every variable is endogenous when it enters the model. Thirdly, pre-testing is not required for the series' univariate features. The model allows for the estimation of series with a combination of integration orders,

including zero I(0) and first I(1) order, with the exclusion of I(2), even though pre-testing is completed.

Fourthly, because the causal relationship between the regressed and regressors cannot be determined in advance, this technique tackles the endogeneity issue in the model. Finally, compared to other approaches, this technology has better small sample qualities, making it ideal for smaller sample sizes. Because of its increasing use in empirical research, this approach is appropriate for assessing the underlying relationship between the development of the banking sector and economic growth. Equation (1) can be phrased as follows and expressed in natural logarithms for simplicity of interpretation:

$$\text{LGDP}_t = \beta_0 + \beta_1 \text{LDC}_t + \beta_2 \text{LIMP}_t + \beta_3 \text{LINFL}_t + \epsilon$$

(2a)

As will be covered below, there are a few prerequisites that must be fulfilled before estimating equation (2).

Section A: ARDL Model

3.6.1. Unit Root Tests

After collecting the data, the first step was to determine whether the data set was integrated by examining its time series properties. Similar to Aurangzeb (2012), the study will employ the Augmented Dickey Fuller (ADF) and Phillips-Perron (PP) Unit Root tests if evidence suggests the existence of a unit root in order to ensure that the data is stable and the results are reliable. For the ADF and PP tests, the alternative hypothesis is that the data is stationary at initial difference or level and that there is no sign of a unit root. For these tests, the existence of a unit root in the series is the null hypothesis. Therefore, this step is taken to make sure that no variables of order two or higher are integrated.

$$\Delta \text{LGDP}_t = \alpha + \beta_1 \Delta \text{LGDP}_{t-1} + \beta_2 \text{LDC}_{t-1} + \beta_3 \text{LIMP}_{t-1} + \beta_4 \text{LINFL}_{t-1} + \epsilon_t \quad (2b)$$

Where:

ΔLGDP_t is the first difference of GDP at time t .

ΔLGDP_{t-1} is the lagged value of GDP at time $t-1$.

$1LDC_{t-i}$ is the lagged value of DC at time $t-1$.

$LIMP_{t-i}$ is the lagged value of IMP at time $t-1$.

$LINFL_{t-i}$ is the lagged value of INF at time $t-1$.

α the intercept term

$\beta_1 \beta_2 \beta_3 \beta_4$ are the coefficient to be estimated.

ϵ_t represents error term.

3.6.2. Bound Cointegration Test

To *determine* whether there is a long-term link between the variables, the cointegration test is used (Gujarati, 2004). The alternative hypothesis, which asserts that cointegration exists, is tested against the null hypothesis, which asserts that cointegration does not exist. Cointegration implies that an unrestricted error correction model (UECM), which may be written as follows, can be used to estimate both long-run and short-run coefficients:

$$\Delta LGDP = \alpha_0 + \lambda_1 LGDP_{t-i} + \lambda_2 LDC_{t-i} + \lambda_3 LIMP_{t-i} + \lambda_4 LINFL_{t-i} + \sum \gamma_1$$

$$\Delta LGDP_{t-i} + \sum \gamma_2 \Delta LDC_{t-i} + \sum \gamma_3 \Delta LIMP_{t-i} + \sum \gamma_4 \Delta LINFL_{t-i} + \epsilon_t \quad (3)$$

where γ_1 and γ_4 are the short run coefficients and $(\lambda_1$ and $\lambda_4)$ are the estimating long run coefficients. Here, we employ the F-test statistic to determine whether a long-term link between the variables exists. To do this, we compare the computed critical values to get a conclusion regarding the cointegration hypothesis.

The null hypothesis of no co-integration is investigated under the condition $H_0: \lambda_1 - \lambda_2 = \lambda_3 = \lambda_4 = 0$, whereas the alternative hypothesis is assessed under the condition $H_1: \lambda_1 \neq \lambda_2 \neq \lambda_3 \neq \lambda_4 \neq 0$. The lower and higher bounds of cointegration are found by comparing the calculated F-test statistic with the two essential bounds. When the calculated value falls below the lower critical constraint, the null hypothesis that there is no cointegration cannot be ruled out. The null hypothesis that there is no cointegration can be rejected if the calculated value exceeds the upper critical restriction. If the calculated F-value is between the two critical limits, the test is considered inconclusive (Pesaran, Shin & Smith, 2001).

3.6.3. Estimating Short-Run Coefficients

After the cointegration test and the identification of an error correction model (ECM), an estimation of the model is proposed. According to Gujarati and Porter (2010), this helps determine how quickly the variables will change in order to reach their long-term equilibrium value. The ARDL-ECM model can be used to estimate the short-term relationship. In ARDL form, the error correction model can be written as follows:

Where:

$$\Delta \ln GDP_t = y_0 + \sum_{i=1}^{p_1} y_{1i} \Delta \ln GDP_{t-i} + \sum_{i=0}^{p_2} y_{2i} \Delta \ln DC_{t-i} + \sum_{i=0}^{p_3} y_{3i} \Delta \ln CPI_{t-i} + \sum_{i=0}^{p_4} y_{4i} \Delta \ln INF_{t-i} + \delta_5 ECM_{t-i} + \mu_t \quad (4)$$

ECM is a residual from the estimated cointegration, and ϕ is the parameter that indicates how quickly changes will occur over time. The ECM's coefficient should ideally be smaller than unity, statistically significant, and have a negative sign.

3.6.4. Estimating Long-Run Coefficients

ARDL Long emphasizes the long-run relationship between variables, which refers to the stable, equilibrium relationship that exists between variables over time. In the context of ARDL Long, this implies that changes in the explanatory variable have a lasting impact on the variable of interest, even after accounting for short-term fluctuations. The longrun estimates of the equation is expanded below.

$$\ln GDP_t = y_0 + \sum_{i=1}^{p_1} y_1 \ln GDP_{t-i} + \sum_{i=0}^{p_2} y_2 \ln DC_{t-i} + \sum_{i=0}^{p_3} y_3 \ln CPI_{t-i} + \sum_{i=0}^{p_4} y_1 \ln INF_{t-i} + \mu_t \quad (5)$$

Section B: Multiple Threshold Ardl Model

3.7. Introduction

The newly developed nonlinear ARDL framework of Shin et al. (2011) was used to look for possible nonlinearities in the relationship between commercial banks,

imports, and inflation and Cameroon's economic growth. A development of Pesaran et al. (2001)'s ARDL limits testing approach, the NARDL approach enables the estimation of asymmetric long- and short-run coefficients within a cointegration framework.³ This method is different from earlier research in a few ways. Kannebly (2008), for instance, uses a variety of techniques to estimate demand equations for broken-down exports. He applies the threshold cointegration model of Balke and Fomby (1997) to Brazilian trade data after testing for cointegration. Remarkably, Kannebly (2008) does not take the currency rate into account while determining exports. He uses relative prices instead. The model he developed permits nonlinear modifications to the equilibrium. Equilibrium mistakes up to a certain magnitude in the event of hysteresis may not be corrected (or may correct at a different rate) than significant departures from the cointegrating relationship. Nonlinearities pertaining to the exchange rate cannot be directly examined because it is not included in the equations.

Moreover, by definition, his method is predicated on a shared long-term relationship and regime-dependent short-run dynamics. On the other hand, the NARDL method can deal with both kinds of asymmetry. In nine out of sixteen cases, Kannebly (2008) finds evidence of nonlinear adjustment to equilibrium errors. Because there are sunk market entry and departure costs, Belke et al. (2012) developed the play-hysteresis model. A company that enters the market as a result of favorable exchange rate changes will remain there even if the rate moves back to its initial levels. As long as variable costs are met, this will be true. A so-called "band of inaction" is created as a result of such behavior, where changes in exchange rates have little effect on market entry or leave. I.e. a lower and an upper threshold exist which must be passed until market entry or exit occurs.

3.7.1. Bi-Threshold Nardl Model

Extending single-threshold NARDL and following Verheyen (2013), fuel price, FP is decomposed as follows.

$$DC_t = DC_0 + DC_t(X_1) + DC_t(X_2) + DC_t(X_3)$$

(1)

WHERE:

DCt(X1), DCt(X2), DCt(X3) represent 3 partial sums series resulted from setting two thresholds at 25th (referred as ω_{25}) and 75th (referred as ω_{75}) quantiles and identified as given below:

$$DC_t(X_1) = \sum_{i=1}^t \Delta DC_i(X_1) = \sum_{i=1}^t \Delta DC_i I\{\Delta DC_i \leq \omega_{25}\} \quad (2a)$$

$$DC_t(X_2) = \sum_{i=1}^t \Delta DC_i(X_2) = \sum_{i=1}^t \Delta DC_i I\{\omega_{25} < \Delta DC_i \leq \omega_{75}\} \quad (2b)$$

$$DC_t(X_3) = \sum_{i=1}^t \Delta DC_i(X_3) = \sum_{i=1}^t \Delta DC_i I\{\Delta DC_i > \omega_{75}\} \quad (2c)$$

$I\{K\}$ refers to a denoting function with value 1 upon fulfilling the conditions in $\{ \}$ in Eq.(2a) (2c), otherwise zero. Following bi-threshold NARDL, cointegration of decomposed domestic credit with GDP is as follows:

$$\Delta GDP_t = \sum_{i=1}^{n_1} \beta_1 \Delta GDP_{t-1} + \sum_{j=1}^3 \sum_{i=0}^n \beta_{ki} \Delta DC_{t-i}(X_j) + \theta_1 GDP_{t-1} + \sum_{j=1}^3 \theta_k DC_{t-i}(X_j) + V_t \quad (3)$$

3.7.2. Multiple Threshold NARDL

In accordance with Pal and Mitra (2015, 2016) and generalizing the traditional single-threshold NARDL of Shin et al. (2014), domestic credit, DC is divided into m partial sums as follows:

$$DC_t = DC_0 + \sum_{j=1}^m DC_t(\varphi_j) \quad (4)$$

where $DC_t(\zeta_j)$ is m partial sums resulted from setting $(m - 1)$ thresholds from first to $(m - 1)$ th quantiles referred as $\omega_1, \omega_2, \dots, \omega_{m-1}$, respectively, and identified as given below:

$$DC_t(\zeta_1) = \sum_{i=1}^t \Delta DC_i(\zeta_1) = \sum_{i=1}^t \Delta DC_i I\{\Delta DC_i \leq \omega_{m1}\} \quad (5a)$$

$$DC_t(\zeta_2) = \sum_{i=1}^t \Delta DC_i(\zeta_2) = \sum_{i=1}^t \Delta DC_i I\{\omega_{m2} < \Delta DC_i \leq \omega_{m3}\} \quad (5b)$$

$$DC_t(\zeta_m) = \sum_{i=1}^t \Delta DC_i(\zeta_m) = \sum_{i=1}^t \Delta DC_i I\{\Delta DC_i > \omega_{m-1}\} \quad (5c)$$

When the requirements in $\{ \}$ in Eq. (5a) – (5d) are met, $I\{K\}$ refers to a designating function with value 1; otherwise, it is zero. The cointegration of decomposed domestic credit variations with GDP after multiple threshold NARDL looks like this:

$$\Delta GDP_t = \sum_{i=1}^{n_1} \beta_{1i} \Delta GDP_{t-1} + \sum_{j=1}^m \sum_{i=0}^n \beta_{ji} \Delta DC_{j,t-i}(\zeta) + \theta_1 GDP_{t-1} + \sum_{j=1}^m \theta_k DC_{j,t-1}(\zeta_1) + V_t$$

(6)

Section C: Narld Model

A Production function has an inconclusive nature and encourages researchers to explore the linkage between commercial banks, import, inflation and economic growth. In doing so, studies employ different models and incorporate different intermittent variables. This study serves to explore the link between commercial bank development import, inflation, and economic growth in Cameroon covering the period from 1970 to 2019. Inflation, imports were incorporated as additional variables to deal with the issue of omitted variable bias. In investigating the relationship between the variables, the economic growth model is specified as follows:

$$\text{GDP} = \alpha + \beta_1 \text{DC}_t + \beta_2 \text{INF}_t + \beta_3 \text{IMP}_t + \mu t$$

(1)

Where:

GDP Represents Gross Domestic Product;

DC_t Represents domestic credit at time *t*

IMP_t Represents imports at time *t*

INF_t Represents inflation or consumer price index at time *t*

μt Shows the Error term that is thought to be regularly dispersed.

3.8. Non-Linear ARDL Co-Integration Test

This study uses the non-linear co-integration technique to examine the relationship between the variables because of the asymmetry in the development of commercial banks and the gross domestic product. The non-linear ARDL (NARDL) co-integration technique, which was first used by Shin et al. (2014), is used in this study. The ARDL model of Pesaran and Shin (1999) and Pesaran et al. (2001), which aims to capture both long run and short run asymmetries in a variable of interest, is extended asymmetrically using this method. The study specifies the following asymmetric long run equation of gross domestic product in accordance with the NARDL framework, which was first presented by Shin et al. (2014):

$$\begin{aligned} \Delta GDP_t = & \alpha_0 + GDP_{t-1} + \theta_1^+ DC_{t-1}^+ + \theta_2^- DC_{t-1}^- + \theta_3 INF_{t-1} + \\ & \theta_4 IMP_{t-1} + \sum_{i=1}^p \alpha_{1i} \Delta GDP_{t-i} + \sum_{i=0}^{q1} a_{2i} \Delta DC_{t-i}^+ + \sum_{i=0}^{q2} a_{3i} \Delta DC_{t-i}^- + \\ & \sum_{i=0}^{q3} a_{4i} \Delta INF_{t-i} + \sum_{i=0}^{q4} a_{5i} \Delta IMP_{t-i} + D_t + u_t \end{aligned} \quad (2)$$

Where α denotes the short-run estimates in equation 2, while the long run estimates are indicated by θi with $i=1-9$. This implies that the immediate effects of the exogenous variables, commercial bank development, inflation, import on the endogenous variable gross domestic product are determined by the short run analysis. The long run analysis focuses on the time reaction and speed of adjustment towards long run equilibrium. In order to determine the existence of asymmetries in the short run ($\alpha = \alpha^+ = \alpha^-$), the Wald test is applied. The Wald test is also employed to find the asymmetries in the long run ($\theta = \theta^+ = \theta^-$). p and q are employed to show the optimal lag length. To capture the structural breaks, a dummy variable D_t is included determined by Kim and Perron (2009) unit root test. E_t^+ and E_t^- are achieved by partially summing of negative and changes in E , presented as follows;

$$E_t^+ = \sum_{j=1}^t \Delta E_j^+ = \sum_{j=1}^t \max(\Delta E_j, 0), E_t^- = \sum_{j=1}^t \min(\Delta E_j, 0) \quad (3)$$

Where E represents the commercial bank development indicators, DC_t In order to determine the existence of long run co-integration between GDP, DC, INF, IMP while accommodating asymmetries, the study follows the bounds test by Shin et al. (2014) which is the joint test of all the lagged levels of regressor. The study employs the F-statistics test by Pesaran et al. (2001) as well as the t-statistics which was formulated by Banerjee et al. (1998). Commencing with the t-statistics, the null hypothesis: $\theta = 0$ is tested against the alternative hypothesis: $\theta < 0$, while with the F-statistics, the null hypothesis: $\theta^+ = \theta^- = \theta = 0$ is estimated. The rejection of the null hypothesis indicates that there is a long run relationship between economic growth, financial development, inflation, investment and trade. Finally, to estimate the asymmetric estimates for long run, the study follows $Lm^+ = \theta^+/\rho$ and $Lm^- = \theta^-/\rho$.

3.9. Summary

The research approach employed to conduct this study is the main topic of this chapter. The research design, data collection techniques, sampling strategy, research instrument, model specification, construct measurement, and data analysis were all covered in this chapter.

The future progress of the study depends on the research approach. Both quantitative and descriptive research methodologies were employed to gather quantifiable and numerical data.



4. CHAPTER FOUR: DATA ANALYSIS, RESULTS AND DISCUSSION

4.1. Introduction

This study was carried out with the aim of investigating the impact of factors of commercial banks (domestic credit) and macro-economic factors (imports, inflation,) on economic growth of Cameroon and examining the link between the role of commercial banks factors (domestic credit) and macro-economic factors (imports, inflation,) on the economic growth in Cameroon. The study looked in detail the effects of domestic credit, inflation, imports, and their impact on economic development which was measured as the growth of the country's GDP. This chapter focuses on data analysis, interpretation, and presentation of the findings by presenting a discussion on, descriptive statistics, and regression analysis.

4.2. Graphical Representation of Data.

Below we are going to have the description of data in a line graph for the different years and different variables.

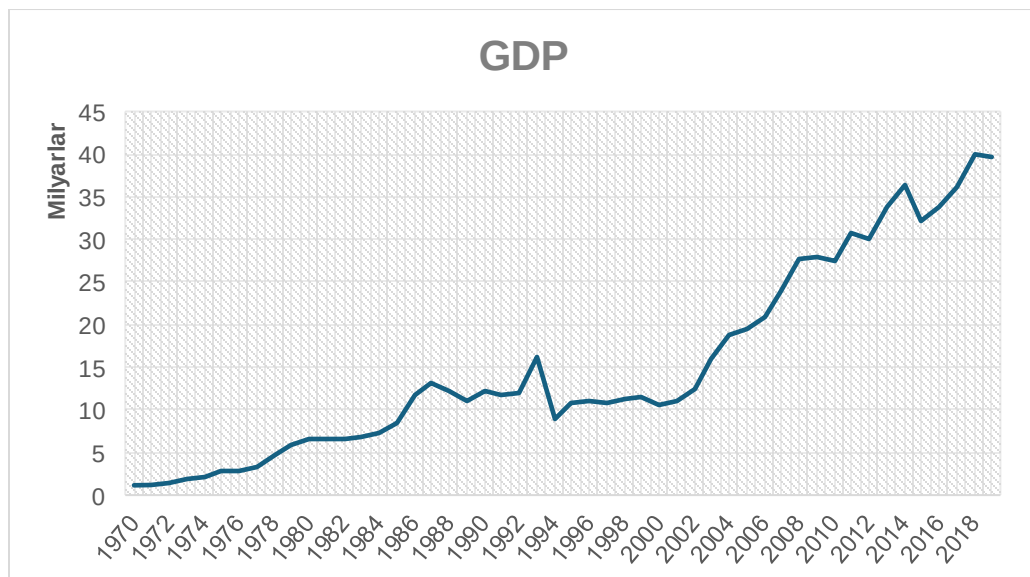


Figure 1: Graphical representation of gross domestic product

The graph above shows the variation in GDP of Cameroon from the year 1970 to 2019 the figures are expressed in billions. As the graph shows there has been an increase in the GDP that is in the year 1970, she had 1 billion and in the year 1993 it was 16billion before falling down again to 8billions now we see that in the year 2019 we have a figure of 39billions showing how the increase in the values due to Increases in capital goods, labor force, technology, and human capital which leads to economic growth.

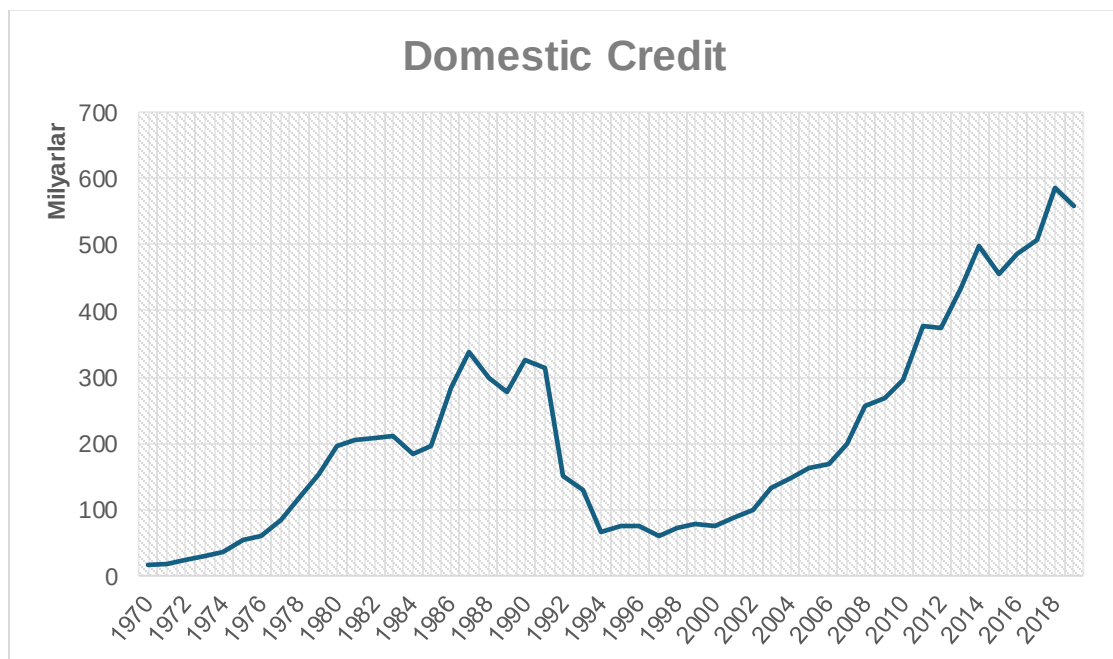


Figure 2: Graphical representation of domestic credit.

The graph above presents the data for domestic credit over a period of 49years that is 1970 to 2019 and the figures are in billions this figure witnessed an increase in the year 1987 and a drastically fall in the year 1997 and from the year 2000 we can see how it started rising till the year 2018 where she reaches her pick values.

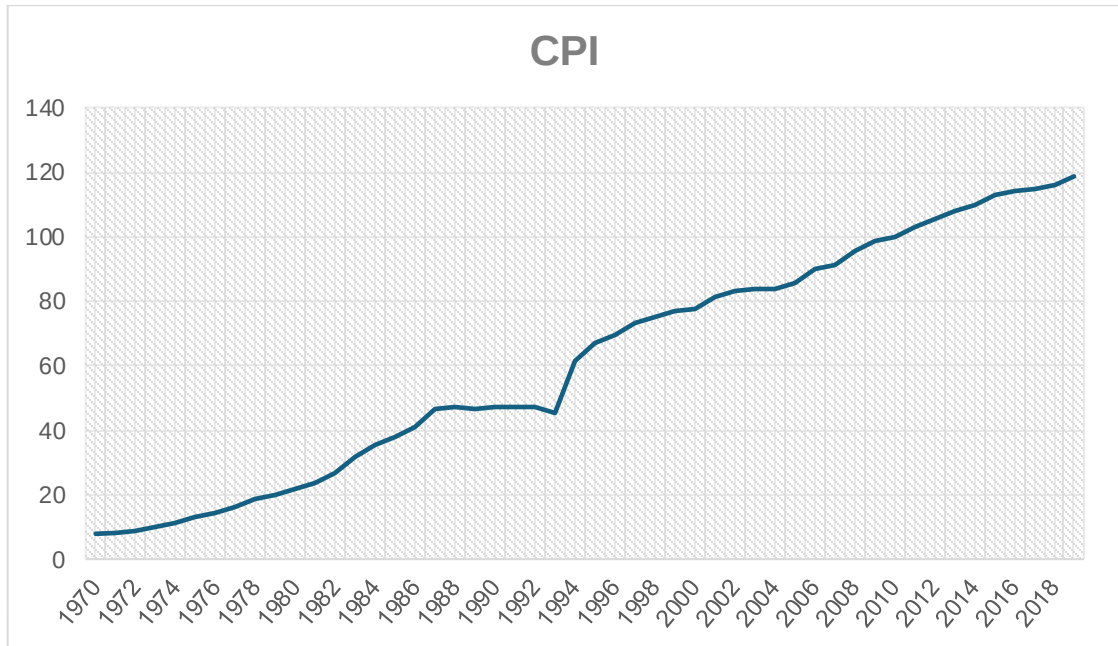


Figure 3: Graphical representation of CPI (inflation).

From the graph above we can see that CPI there has been a continuous increase in the value of CPI from the year 1997 to 2019. Certain fiscal and monetary policies such as tax cuts or lower interest rates are potential drivers for these increases.

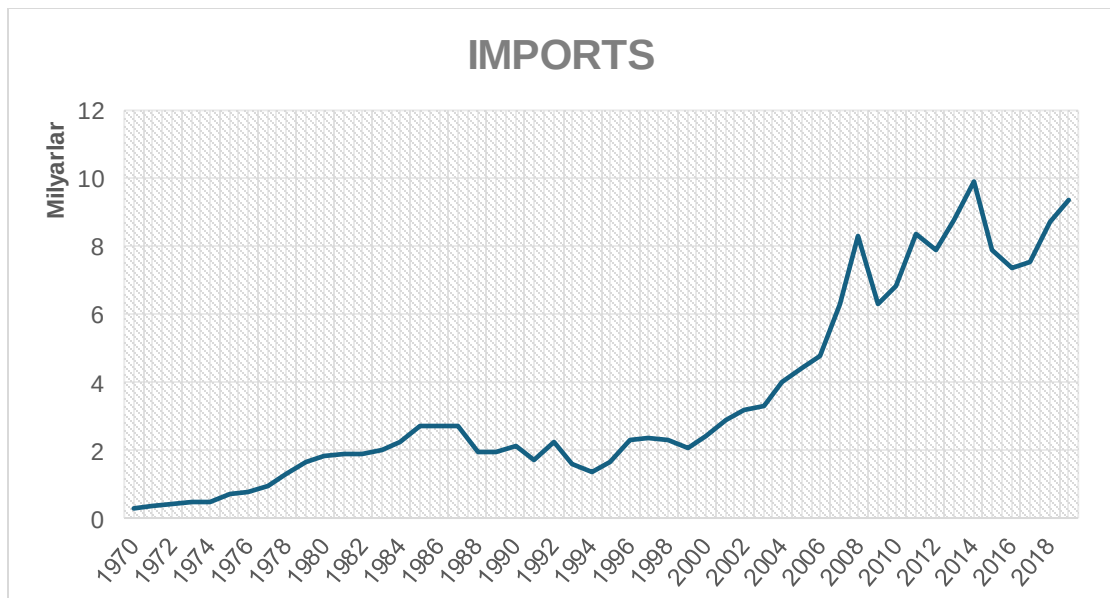


Figure 4: Graphical representation of imports.

The graph above shows the variations in figures of imports over a period of 49 years this shows the different increase and decrease in the level of imports which has been witnessing a fluctuation from 1970 to 2019.

4.3. Descriptive Statistics

Descriptive statistics are used to describe basic features about a data in a study. They provide summaries from the data that help construct meaning of the data in a sensible way. The study utilized descriptive statistics such as minimum, maximum, mean, standard deviation and skewness. Minimum was used to describe the lowest data point in the data set while maximum was used to describe the greatest number in a data set. The mean is used to describe the average value of a dataset. Standard deviation is a measure of dispersion and tells how spread out a data point is in reference to the mean. Standard deviations above the mean indicate that the data is dispersed far away from the mean while standard deviations below the mean indicate that most of the data points are close to the mean. Skewness is used to measure the departure of asymmetry of a data set in comparison to a normal distribution. A skewness value that is positive indicates that the distribution is skewed to the right while a negative skewness value indicates that a distribution is skewed to the left.

Table 1: Eviews descriptive statistics.

	GDP	DC	CPI	IMP
Mean	1.53E+10	2.10E+11	61.39	3.55E+09
Median	1.17E+10	1.77E+11	64.21	2.30E+09
Maximum	4.00E+10	5.86E+11	118.65	9.91E+09
Minimum	1.15E+09	1.64E+10	7.88	2.84E+08
Std. Dev	1.14E+10	1.55E+11	36.11	2.85E+09
Skewness	0.756350	0.786764	0.0034	0.886311
Kurtosis	2.360360	2.657486	1.64	2.358828
Jarque-Bera	5.619585	5.402728	3.86	7.402684
Probability	0.060217	0.067114	0.145	0.024690
Sum	7.64E+11	1.05E+13	3069.2	1.78E+11
Sum Sq. Dev.	6.36E+21	1.18E+24	63878.0	3.99E+20
Observations	50	50	50	50

For a normal skewness the value must be equal to 0 but as seen in the diagram above we observe that the values of our different variable ranges between 0.003 to 0.886 which simply means that it mirrors a normal distribution. And for the kurtosis it measures the pickiness or flatness of a distribution of a series and observed above the kurtosis value of cpi is 1.638 which is clearly lower than a value of 3 which simply means that the value is clearly platykurtic. as of GDP DC and IMP it simply implies that the value are more or less leptokurtic.

4.4. Empirical Analysis

SECTION A: ARDL MODEL

4.4.1. Pearson Correlation Coefficient Test

After figuring out the variables' univariate characteristics and the order of integration, the following step is to calculate the optimal lag duration for the model. This was ascertained using lag length metrics, including the Akaike Information Criterion (AIC), Schwarz Bayesian Criterion (SC), and Hannan-Quinn Criterion (HQ). The SC

and HQ information criteria were used in this study because of their reliability and strength.

Table 2: Eviews pearson correlation coefficient test

	LGDP	LCPI	LDC	LIMP
LGDP	1	0.957	0.843	0.970
LCPI	0.957	1	0.690	0.919
LDC	0.843	0.690	1	0.852
LIMP	0.970	0.919	0.852	1

To determine if the variables in the model have a linear connection, the study employed the Pearson correlation coefficient test. Additionally, the test was performed to check for multicollinearity among the variables, which could lead to inaccurate estimates of the multiple regression's coefficients. The coefficients between all variables, as indicated in table 3 below, were all over 0.9 in this regard, indicating the likelihood of multicollinearity, given that they are close to 1. This indicates that multicollinearity may significantly affect the estimation results of a multiple regression, making them unreliable.

4.4.2. Unit Root Test

Although testing for unit root is not necessary for the ARDL technique, it is still necessary to ensure that the series are not integrated to an order greater than one. Therefore, it is possible to get erroneous findings when using the ARDL approach to data series that are integrated to more than one order.

Table 3: Eviews unit root test at in pp at level.

UNIT ROOT TEST TABLE (PP)					
At Level					
		LGDP	LDC	LIMP	LCPI
With Constant	t-Statistic	-2.464	-2.054	-2.121	-4.337
	Prob.	0.130	0.264	0.278	0.001
		NO	NO	NO	***
With Constant & Trend	t-Statistic	-2.530	-2.048	-2.364	-1.174
	Prob.	0.313	0.561	0.393	0.905
		NO	NO	NO	NO
Without Constant & Trend	t-Statistic	3.273	1.524	2.852	2.825
	Prob.	0.999	0.967	0.999	0.999
		NO	NO	NO	NO

The results, which are shown in the table above, show that all variables are stationary, either in level or after first difference, based on the ADF and PP unit root tests. This suggests that an ARDL regression analysis may be performed on the data and that the unit root null hypothesis can be rejected at the 1 percent and 5 percent significance levels, respectively.

Table 4: EvIEWS unit root test at in pp at first difference.

UNIT ROOT TEST TABLE (PP)					
At First Difference					
		d(LGDP)	d(LDC)	d(LIMP)	d(LCPI)
With Constant	t-Statistic	-7.242	-5.064	-6.246	-4.481
	Prob.	1.119	0.0001	2.54132	0.0007
		***	***	***	***
With Constant & Trend	t-Statistic	-7.652	-5.134	-6.368	-5.974
	Prob.	1.635	0.0006	1.3101	4.676
		***	***	***	***
Without Constant & Trend	t-Statistic	-6.121	-4.708	-5.510	-2.737
	Prob.	1.236	1.271	3.782	0.007
		***	***	***	***

From the table 4 above we can Notes that (*) **Significant at the 10%; (**) Significant at the 5%; (***) Significant at the 1%. and (no) Not Significant.** We can observe that all the variables at first difference are significant at 1%. In practical terms, this could imply that the changes in these variables have a substantive impact on the dependent variable in our model. It indicates a strong statistical association between the changes in these variables and the changes in the dependent variable we are studying. This finding can be essential for understanding the dynamics and relationships within our data and for making informed decisions or predictions based on our analysis.

This table is displaying results from an Augmented Dickey-Fuller (ADF) unit root test, which is used to determine whether a time series is stationary or contains a unit root (indicating non-stationarity). It's a common test in econometrics for checking the presence of unit roots. LGDP, LDC, LIMP, LCPI These are likely variables in the tested time series. The "L" may imply that they are logged values, which is common in time series analysis to help stabilize variance. From the table, LCPI is significant at the 1% level when including a constant (meaning it is stationary at this specification), while LIMP is significant at the 5% level with both constant and trend (also stationary at this

specification). The other variables are not statistically significant, suggesting they might have a unit root under the test specifications shown.

Table 5: Eviews unit root test at in adf at level.

UNIT ROOT TEST TABLE (ADF)					
At Level					
		LGD	LDC	LIMP	LCPI
		P			
With Constant	t-Statistic	-	-2.110	-2.142	-4.591
		2.464			
	Prob.	0.130	0.242	0.2305	0.0005
		NO	NO	NO	***
With Constant & Trend	t-Statistic	-	-1.813	-4.290	-1.157
		2.547			
	Prob.	0.305	0.683	0.008	0.908
		NO	NO	***	NO
Without Constant & Trend	t-Statistic	3.082	2.286	2.978	2.116
	Prob.	0.999	0.994	0.999	0.991
		NO	NO	NO	NO

The results of an Augmented Dickey-Fuller (ADF) unit root test at the data series' first difference are shown in this table. This indicates that the test is not examining the initial values of $d(\text{LGDP})$, $d(\text{LDC})$, $d(\text{LIMP})$, or $d(\text{LCPI})$, but rather the stationarity in the changes between consecutive data points. These are probably the tested time series first logged variable differences. All of the variables in this table are significant at the 1% level when a constant is introduced, suggesting stationarity in their initial differences. The results are inconsistent when a trend and constant are included; only $d(\text{LDC})$ is significant at the 1% level. None of the variables are significant in the absence of a constant or trend, indicating that a constant or trend is necessary for the series in order for the test to show stationarity at the first difference.

Table 6: Eviews unit root test in adf at first difference.

UNIT ROOT TEST TABLE (ADF)					
At First Difference					
		d(LGDP)	d(LDC)	d(LIMP)	d(LCPI)
With Constant	t-Statistic	-7.248	-4.851	-6.261	-4.422
	Prob.	1.099	0.0002	2.422	0.0008
		***	***	***	***
With Constant & Trend	t-Statistic	-7.658	-4.905	-6.367	-5.976
	Prob.	1.604	0.001	1.315	4.634
		***	***	***	***
Without Constant & Trend	t-Statistic	-5.933	-4.540	-5.481	-2.108
	Prob.	3.861	2.408	4.370	0.035
		***	***	***	**

Notes: (*) Significant at the 10%; (**) Significant at the 5%; (***) Significant at the 1%. and (no) Not Significant

4.4.3. Bound Test Approach To Cointegration.

Table 7: Eviews bound test approach to cointegration.

Test statistic	Value	k
F-statistic	13.14	3
Critical Value Bounds		
Significance	I(0) Bound	I(1) Bound
10%	2.72	3.77
5%	3.23	4.35

To find out if there is a long-term link between the variables, the bound cointegration test was run. The test results are displayed in the table above, and at the five percent significance level, the computed F-statistic value of 13.14 is more than the crucial upper bound values of 4.35. This suggests that there is a long-term relationship

between GDP and the model's variables, which allows the null hypothesis that there is no cointegration to be rejected.

4.4.4. Error Correction Model ARDL Short Run

Table 8: Eviews error correction model ardl short run.

Variable	Coefficient	Std. error	t-statistic	Prob.
C	2.554	0.333	7.662	0.0000
D (LGDP (-1))	0.428	0.104	4.126	0.0002
D (LGDP (-2))	0.235	0.132	1.775	0.0849
D(LDC)	0.229	0.053	4.279	0.0001
D (LDC (-1))	-0.315	0.066	-4.794	0.0000
D (LDC (-2))	-0.303	0.103	-2.942	0.0058
D(LCPI)	-1.818	0.257	-7.063	0.0000
D (LCPI (-1))	0.557	0.236	2.359	0.0242
D (LCPI (-2))	-0.721	0.214	-3.379	0.0018
CointEq(-1)*	-0.469	0.062	-7.564	0.0000
R-SQUARED	0.879		Mean dependent var	0.069
Adjusted R-squared	0.849		S.D dependent var	0.148
S.E of regression	0.057		Akaike info criterion	-2.693
Sum Squared resid	0.122		Schwarz criterion	-2.299
Log likelihood	73.285		Hannan-Quinn criter	-2.545
F-statistic	29.897		Durbin- Watson stat	2.037
Prob (F-statistic)	0.000000			

**P-value incompatible with t-bounds distribution.*

An error correction model's Autoregressive Distributed Lag (ARDL) short-run model estimation is shown in the table. This kind of research accounts for the potential that the underlying data-generating processes may not be stationary by examining the connection over time between a dependent variable and multiple independent variables.

- The estimated effects of each independent variable (or its delays) on the dependent variable are expressed as numerical numbers. For instance, the coefficient for D(LGDP(-1)) is 0.428, indicating that, under the assumption that all other variables remain constant, a one-unit rise in D(LGDP) from the prior period raises D(LGDP) by 0.428 units in the present period.

CointEq(-1)* The coefficient of this error correction term is -0.469. It shows how quickly the dependent variable adjusts to return to long-term equilibrium following a change. Approximately 46.9% of the disequilibrium in this model is corrected from one period to the next. With an R-squared of 0.879, the model explains approximately 87.9% of the variation in the dependent variable. The overall significance of the model is tested using the F-statistic and its p-value, which show that all of the independent variables together have a statistically significant impact on the dependent variable.

4.4.5. Long-Run Estimates

Table 9: Eviews table estimated long run coefficients using the ardl.

Variable	Coefficient	Std. Error	t- Statistics	Prob
LIMP	0.682	0.146	4.682	0.000
LDC	0.119	0.059	2.002	0.053
LCPI	0.042	0.177	0.239	0.813

$$EC = LGDP - (0.6817 * LIMP + 0.1193 * LDC + 0.0422 * LCPI)$$

The figure above displays the long-run coefficients of the ARDL estimation. The results show that only the relationship variables and economic growth were found to be positive and statistically significant over the long term, whereas all other explanatory variables were found to be statistically unimportant. Although the positive association between the variables and GDP growth is in line with the study's theoretical expectations, the multiple regression results could not be relied upon. This may be due to multicollinearity, as evidenced by the high correlation coefficients in the table below.

SECTION B: TRESHLOD ARDL ANALYSIS MODEL

4.4.6. Treshlod Ardl.

The table below shows the multiple treshlod ARDL

Table 10: EvIEWS threshold ardl model

Variable	Coefficient	Std. error	t-statistic	Prob.
LGDP (-1)	0.771	0.138	5.648	0.000
LGDP (-2)	-0.428	0.135	-3.165	0.003
LGDP (-3)	0.296	0.106	2.793	0.008
LDCREG1	0.123	0.097	1.269	0.213
LDCREG (-1)	-0.478	0.136	-3.521	0.001
LDCREG (-2)	0.849	0.156	5.458	0.000
LDCREG (-3)	-0.458	0.120	-3.802	0.001
LDCREG2	0.613	0.218	2.816	0.008
LDCREG2 (-1)	-0.475	0.223	-2.124	0.041
LDCREG3	0.859	0.130	6.586	0.000
LDCREG 3(-1)	-0.553	0.167	-3.435	0.002
C	7.361	3.195	2.304	0.026
R-SQUARED	0.993		Mean dependent var	23.280
Adjusted R-squared	0.990		S.D dependente var	0.750183
S.E of regression	0.074		Akaike info criterion	-2.162453
Sum Squared resid	0.184		Schwarz criterion	-1.685416
Log likelihood	61.736		Hannan-Quinn criter	-1.983752
F-statistic	422.59		Durbin- Watson stat	1.911
Prob (F-statistic	0.000			

In econometrics, a threshold autoregressive distributed lag (ARDL) model is used to estimate the relationship between a dependent variable and its own lagged values, as well as the lagged values of other independent variables. The results of this model are displayed in the table. This model allows for different coefficients in different regimes, which allows it to express nonlinear connections 99.3% of the variability in the dependent variable can be explained by the model, according to R-Squared 0.993. With a p-value of 0.000 and an F-statistic of 422.59, the model is considered statistically significant.

This table is usually used to evaluate the model's goodness of fit, the variables' relevance, and the optimal model specification determined by information criteria.

4.4.7. Threshold ARDL Short-Run Estimates

Table 11: Eviews threshold ardl short-run estimates

Variable	Coefficient	Std. error	t-statistic	Prob.
D(LGDP (-1))	0.133	0.088	1.511	0.1401
D(LGDP (-2))	-0.296	0.089	-3.311	0.002
D(LDCREG1)	0.123	0.084	1.455	0.155
D(LDCREG1(-1))	-0.391	0.084	-4.676	0.000
D(LDCREG1(-2))	0.458	0.098	4.668	0.000
D(LDCREG2)	0.613	0.153	4.005	0.0003
D(LDCREG3)	0.859	0.093	9.235	0.000
CointEq(-1)*	-0.355	0.113	-3.143	0.005
R-SQUARED	0.811912		Mean dependent var	0.066
Adjusted R-squared	0.777		S.D dependente var	0.147
S.E of regression	0.069		Akaike info criterion	-2.336
Sum Squared resid	0.184		Schwarz criterion	-2.018
Log likelihood	31.74		Hannan-Quinn criter	-2.217
Durbin- Watson stat	1.911			

The short-run coefficients from the threshold ARDL estimation are shown in the table below. Coefficient of shows the effect that each variable has on the dependent variable, as well as its direction and amplitude. For instance, D(LDCREG3) has a coefficient of 0.859, which indicates a significant positive impact. Prob. is a representation of the p-values for the t-statistics. It displays each coefficient's significance. A statistically significant coefficient is usually shown by values less than 0.05. The variables that are statistically significant in this case are D (LGDP (-2)), D(LDCREG1(-1)), D(LDCREG1(-2)), D(LDCREG2), and CointEq (-1). R-squared adjusted shows the percentage of the dependent variable's variance that the model can account for. With a coefficient of 0.777, the model accounts for around 77.7% of the variation, which is a reasonably high percentage. Watson-Durbin stat This test looks for

autocorrelation in the statistical regression analysis's residuals. Given that the 1.911 statistic is near to 2, it is likely that there is little to no autocorrelation.

The lagged error correction term (ECT) from a cointegrating equation is referred to as CointEq(-1) and is an essential part of an ARDL model. This phrase is typically used to represent the rate at which variables change to bring about long-term equilibrium following a short-term disequilibrium. For CointEq (-1) the coefficient of -0.355 is very significant because it tells us two things:

The CointEq (-1) has a p-value (Prob.) of 0.005, which is less than the usual significance level of 0.05. This suggests that there is statistical significance for the error correction term. If there is a departure from the long-run equilibrium, the system will adjust a portion of that divergence over the following period, according to the negative coefficient. In this instance, each period sees the correction of about 35.5% of the disequilibrium. The existence and importance of CointEq (-1) support the existence of a long-run equilibrium relationship between the variables and aid in the comprehension of the dynamics governing the speed at which variables return to equilibrium following a shock.

4.4.8. Threshold Ardl Long-Run Estimates

Table 12: Eviews threshold ardl long run estimates

Variable	Coefficient	Std. Error	t- Statistics	Prob
LDCREG1	0.103	0.072	1.422	0.164
LDCREG2	0.390	0.132	2.953	0.006
LDCREG3	0.862	0.104	8.295	0.000
C	20.72	0.225	91.88	0.000

$$EC = LGDP - (0.1027) * LDCREG1 + 0.3900 * LDCREG2 + 0.8616 * LDCREG3$$

The table shows estimated long-run coefficients from an Autoregressive Distributed Lag (ARDL) model, a statistical technique used to estimate the relationship among variables over time. Here are the key elements from the table: Examining the coefficients and the p-values (Prob) that go with them: LDCREG1: The coefficient is 0.103, and the p-value is 0.164. Since the coefficient is greater than 0.05, it is usually

not regarded as statistically significant. LDCREG2: The p-value of 0.006 and the coefficient of 0.390 indicate statistical significance. LDCREG3 The effect is extremely statistically significant, as indicated by the coefficient of 0.862 and p-value of 0.000. With a p-value of 0.000, the constant term (c) has remarkable statistical significance with a coefficient of 20.72. Additionally, the model includes an error correction component ($EC = LGDP - 0.1027$), a technique common to ARDL models that corrects for imbalances or disequilibrium between the current values of the variables and the long-run relationship. The figures beside the variables (LDCREG1, LDCREG2, and LDCREG3) in the error correction term are coefficients indicating the speed of adjustment towards equilibrium. The terms with asterisks indicate they are statistically significant in the model.

4.4.9. Bound Test Approach to Cointegration Threshold ARDL.

Table 13: Eviews Bound Test Approach to Cointegration Threshold Ardl

Test statistic	Value	k
F-statistic	1.768	3
Critical Value Bounds		
Significance	I (0) Bound	I (1) Bound
10%	2.72	3.77
5%	3.23	4.35

The table below shows the bound cointegration threshold ARDL test and we can observe that the F-statistic value is 1.7 which means there is no longrun relationship between gdp and the variables.

SECCTION C: NARDLANALYSIS MODEL

4.4.10. Bound Test Approach To Cointegration NARDL.

Table 14: Eviews bound test approach to cointegration nardl

Test statistic	Value	k
F-statistic	8.667	4
Critical Value Bounds		
Significance	I(0) Bound	I(1) Bound
10%	2.45	3.52
5%	2.86	4.01

Table above represents bounds test for in the NARDL model between GDP and other variables. The F-statistic is greater than the lower and upper critical values. This means that we reject the null hypothesis and there is a long run relationship between economic growth and the independent variables.

4.4.11. NARD Long-Run Estimates.

Table 15: Eviews threshold ardl long run estimates.

Variable	Coefficient	Std. Error	t- Statistics	Prob
LDC_P	0.249	0.088	2.819	0.008
LDC_N	0.209	0.037	5.726	0.000
LCPI	0.283	0.099	2.844	0.008
LIMP	0.475132	0.135972	3.494344	0.002
$EC = LGDP - (0.249 * LDC_P + 0.209 * LDC_N + 0.283 * LCPI + 0.475 * LIMP)$				

The table above shows that there is a 0.249 drop in GDP for every unit increase in DC, or LDC_POS. This shows that economic growth and DC have a positive connection, i.e., they move in opposing directions. GDP will rise in the event that the economy experiences a DC shift. Nonetheless, GDP will decline by 0.209 in the event that DC (DC_NEG) decreases by one unit. As a result, it indicates that the relationship is bad.

4.4.12. NARDL Short-run estimates

Table 16: Eviews nardl short-run estimates.

Variable	Coefficient	Std. error	t-statistic	Prob.
C	6.977	0.999	6.983	0.000
D (LGDP (-1))	0.305	0.078	3.916	0.001
D (LDC_P)	0.527	0.082	6.420	0.000
D(LDC_N)	0.038	0.063	0.600	0.552
D (LDC_N(-1))	-0.498	0.072	-6.949	0.000
D (LDC_N (-2))	-0.185	0.086	-2.143	0.040
D(LDC_N(-3))	-0.092	0.064	-1.433	0.162
D(LCPI)	-1.273	0.184	-6.910	0.000
D (LCPI (-1))	0.235	0.220	1.069	0.294
D (LCPI (-2))	-0.482	0.204	-2.369	0.025
CointEq(-1)*	-0.625	0.089249	-7.008	0.000
R-SQUARED	0.919		Mean dependent var	0.065
Adjusted R-squared	0.894		S.D dependente var	0.149
S.E of regression	0.048		Akaike info criterion	-3.014
Sum Squared resid	0.079		Schwarz criterion	-2.573
Log likelihood	78.83		Hannan-Quinn criter	-2.850
F-statistic	38.3		Durbin- Watson stat	2.046
Prob (F-statistic	0.000			

The table above computes the short-term estimates for DC. The CoinEq (-1) rejects the existence of a short-run relationship between economic growth and DC in the economy because its value of 0.625 is negative and significant at the 1% level of significance. According to the ECM results, the economic growth's short-run deviation is adjusted by 62.5% per quarter in the direction of the long-run equilibrium.

5. CHAPTER FIVE: RESEARCH CONCLUSIONS

5.1. Introduction

After reviewing the regression data and results analysis discussed in the previous chapter, this chapter will offer the study's conclusion and recommendations.

5.2. Research Conclusion

This study was conducted to determine how Cameroon's economic growth is influenced by the increase of commercial banks, imports, and inflation. The long- and short-term relationships between GDP growth, domestic credit, imports, and inflation were established by the study using the quantitative ARDL approach. In order to determine the link between the variables, we also used the quantitative NARDL and TRESHOLD methodologies.

To that end, data from imports and inflation were analyzed, together with data on GDP growth rate and development indicators of banks, like domestic credit, from 1970 to 2019. To ensure that the data was stationary and capable of yielding reliable results, the ADF and PP unit root tests were used to assess the data for unit roots prior to performing the regression analysis.

The study came to the conclusion that domestic credit, imports, inflation, and economic growth all had a favorable short-term link in this regard.

Nevertheless, it was shown that the growth of the economy and the stability of the banking sector were unrelated.

The study comes to the conclusion that, given the information presented above, it is possible to reject the null hypotheses 1 and 2, which state that there is no correlation between domestic credit and economic growth, imports and economic growth, and inflation.

5.3. Recommendation For Future Studies

This study opens up possibilities for more research expansion on the topic, considering Cameroon's scant research on the topic. Future scholars may want to think about expanding this study in the following ways, which are listed below:

- The role of commercial banks to financial inclusion in Cameroon since the country's independence in 1960 could be the subject of an enlarged version of this study. In order to ensure that unbanked persons have access to financial services and products and to promote inclusive economic growth, it may also recommend policy changes that the government should implement.
- Future scholars may also focus on analyzing the effectiveness of the banking sector in Cameroon because there aren't many banks in the sector and the big four are usually accused of employing anti-competitive practices to keep smaller banks out of the market.
- It is also feasible to investigate the CSR responsibilities of commercial banks and their impact on local communities, given that they are supposedly the most lucrative businesses in Cameroon but have no social influence over communities.
- Once more, the government of Cameroon should promote exports rather than imports in order to boost net revenue, which will raise GDP and ultimately spur economic growth.

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LIST OF TABLES

Table 1: Eviews descriptive statistics.	58
Table 2: Eviews pearson correlation coefficient test	59
Table 3: Eviews unit root test at in pp at level.	60
Table 4: Eviews unit root test at in pp at first difference.	61
Table 5: Eviews unit root test at in adf at level.	62
Table 6: Eviews unit root test in adf at first difference.	63
Table 7: Eviews bound test approach to cointegration.	63
Table 8: Eviews error correction model ardl short run.	64
Table 9: Eviews table estimated long run coefficients using the ardl.	65
Table 10: Eviews threshold ardl model.....	66
Table 11: Eviews threshold ardl short-run estimates	67
Table 12: Eviews threshold ardl long run estimates	68
Table 13: Eviews Bound Test Approach to Cointegration Threshold Ardl.....	69
Table 14: Eviews bound test approach to cointegration nardl	70
Table 15: Eviews threshold ardl long run estimates.	70
Table 16: Eviews nardl short-run estimates.	71

LIST OF FIGURES

Figure 1: Graphical representation of gross domestic product	54
Figure 2: Graphical representation of domestic credit	55
Figure 3: Graphical representation of CPI (inflation).....	56
Figure 4: Graphical representation of imports.	56



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